United States Army

Aviation Digest

Professional Bulletin 1-93-4

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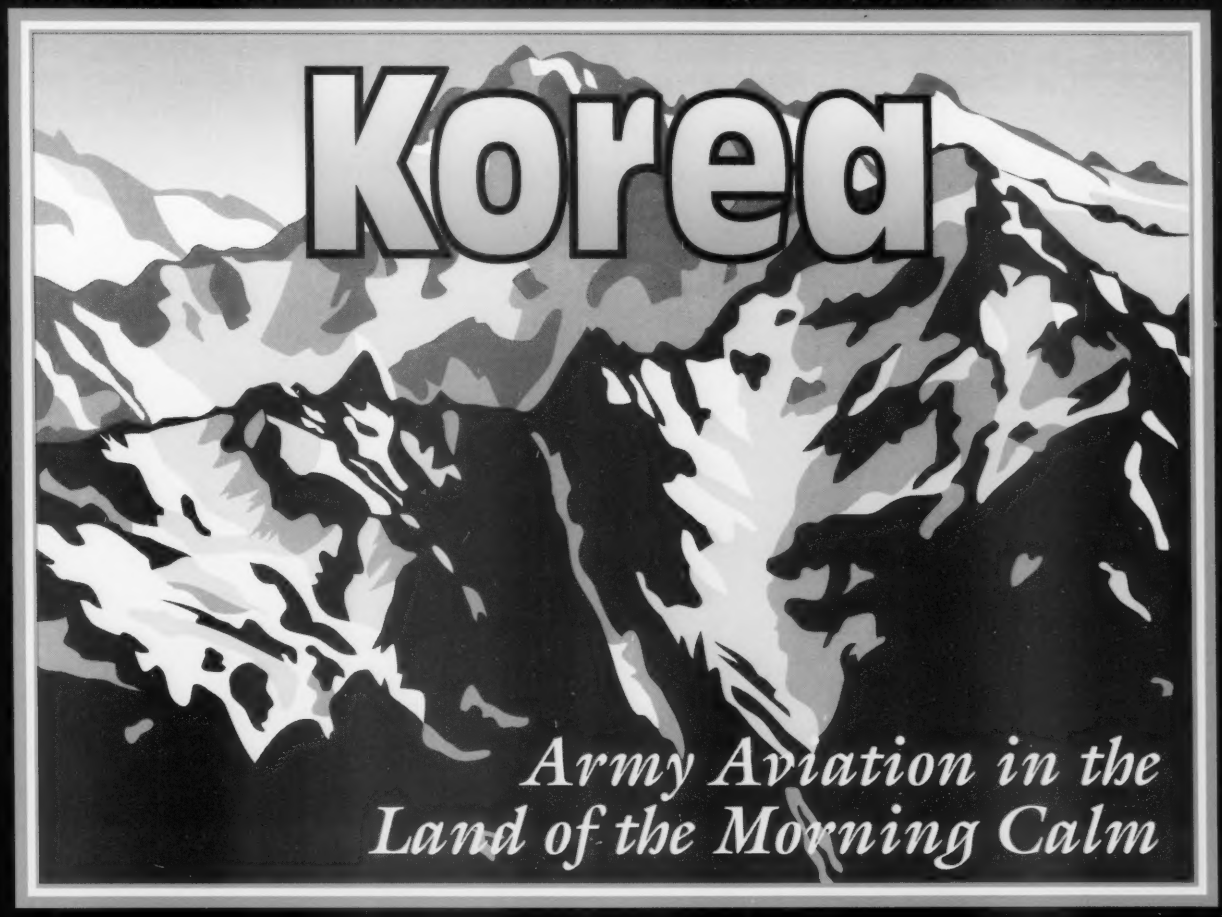

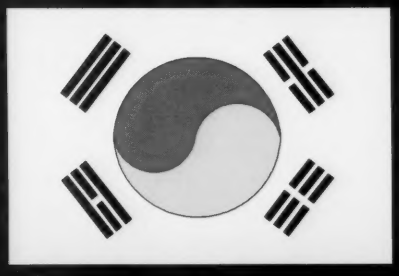

July/August 1993

Aviation Digest

Professional Bulletin

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Back Cover: **C–Nite Cobra and TOW2A, A deadly night combination.** Photo courtesy Mr. Larry Compton, Hughes Aircraft Company. Article starts on page 22.

Cover: **This issue is dedicated to those Army Aviation troops serving with the Eighth U.S. Army, Republic of Korea (ROK). These soldiers train rigorously—in such exercises as Team Spirit '93—to maintain combat readiness against the constant, serious threat of the North Korean Army. For those soldiers who have not served in "the Land of the Morning Calm," the issue calls them to a challenging tour of duty there.**

Major General Dave Robinson
Commander, U.S. Army Aviation Center

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Major General Dave Robinson

Assignment: Fort Eustis

In the last bimonthly issue of ***Aviation Digest***, I relayed the branch emphasis of getting the best and brightest officers, warrant officers, and enlisted soldiers at Fort Rucker, AL. I'm looking for intuitive and aggressive soldiers with field savvy to build our future aviation force. I want the leaders in aviation to cycle in and out (2–3 years) of the Aviation Warfighting Center and channel their operational acumen and energies into a lasting contribution to improve our warfighting capabilities. No stacking arms, no homesteading, and no getting "stuck" at Fort Rucker.

As part of the Aviation team, the U.S. Army Aviation Logistics School (USAALS) at Fort Eustis, VA, is equally important in contributing to the formulation of our future aviation force. An assignment at USAALS provides numerous important opportunities to contribute to the combined arms team.

The USAALS will experience a major reorganization in the first quarter of FY 95. The new organization, the U.S. Army Aviation Maintenance Training Activity (USAAMTA), will have the charter of producing the best aviation maintenance and logistics soldiers in the world. The reorganization results from an impending Combined Arms Support Command restructure initiative driven by congressional mandated resource reductions. The USAAMTA reorganization will result in moving various USAALS activities to Fort Rucker. This effort will ultimately generate a closer alignment within the Aviation Warfighting Team. Subordinate elements of USAAMTA will include a Reserve Component, Training and Operations, Training Development, Evaluation and Standardization element and two staff and faculty companies. Additionally, the USAAMTA organization will include the Departments of Systems Training, Aviation Trades Training, and Attack Helicopter Training. For simplicity, throughout the rest of this article, USAAMTA is used in lieu of USAALS since this designation will be discontinued next FY.

The USAAMTA mission is to train, mentor, and graduate the finest aviation maintenance and logistics soldiers in the world. The USAAMTA mission essential task list is to develop and conduct aviation logistics training for the Total Army (Active and Reserve Component soldiers); support and evaluate aviation logistics training in the field; conduct and guide development of logistics support concepts, doctrine, materiel, and organizations for Army Aviation.

The USAAMTA provides a key link in the chain of Army combat support systems. The school is devoted to the support of Army aviation logistics operations through the development of concepts, doctrine, and training for enlisted soldiers and officers. The USAAMTA boasts that to accomplish its mission, it has the largest concentration of senior aviation noncommissioned officers (NCOs) in the Army.

As one of the cadre at USAAMTA, you will develop, test, and evaluate operational concepts, organizations, and materiel for aviation logistics. You will implement systems approach to training, determine training requirements, and manage the development of soldier training products and the aviation logistics doctrinal literature program. You will instruct officer, warrant officer, and enlisted soldiers, both Active and Reserve Component, in aviation systems and trades. You may stand on the platform and conduct resident NCO instruction at Skill Levels 3 and 4 in the aircraft maintenance career management fields. You may travel to field sites and evaluate external training.

The USAAMTA is a diverse organization with many missions. The activity is responsible for preparing a core of highly trained aviation logistics NCOs and mechanics for worldwide service. In an effort to keep pace with our increasingly sophisticated systems, USAAMTA is modernizing aviation logistics organizations, practices, and support equipment. They develop ARTEP mission training plans for aviation support units, and prepare aviation logistics support doctrine and literature products. Soldiers at the school are also responsible for monitoring and evaluating ongoing Department of the Army aviation maintenance training.

Many opportunities exist in the personnel management field at USAAMTA. The soldier will always remain our number one asset. Accordingly, personnel management is on a priority par with our system modernization initiatives in aviation. When USAALS reorganizes into USAAMTA, two staff and faculty companies will ensure the smooth management of all personnel actions. The two companies will have approximately 300 soldiers and civilians each and represent command opportunities at Fort Eustis.

The existing Directorate of Training and Doctrine (DOTD) manages all phases of aviation maintenance training development during the acquisition of new systems and develops individual training products for aviation soldiers and units. Currently within DOTD is the Department of Aviation Systems Training (DAST), the Department of Aviation Trades Training (DATT), and the Department of Attack Helicopter Training (DAHT). Upon, reorganization in FY 95, DOTD will no longer exist. However, the DAST, DATT, and DAHT will remain as separate departments.

The DAST conducts resident enlisted logistics training for cargo and utility helicopters; officer training in logistics management, maintenance management, and test flights; and provides subject matter expertise to research, develop, write, and review all aviation logistics doctrine. You may even be on a new equipment training team or a mobile training team.

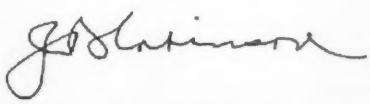
The DATT conducts resident enlisted training in areas of armament, electrical, structural, pneudraulics, powertrain, and propulsion trades for all types of Army aircraft. You may conduct warrant officer training on armament systems.

The DAHT conducts all resident enlisted and warrant officer armament technician training on the AH–64 Apache, and systems training on the AH–1 Cobra, OH–58 Kiowa (A, C, and D model) helicopters.

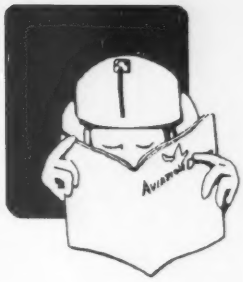
The Directorate of Combat Developments (DCD) develops aviation ground support equipment requirements, aviation logistics concepts, and tomorrow's doctrine with regard to training, materiel, and organizational structures. In FY 95, the USAALS DCD will be integrated into Fort Rucker's DCD.

The restructuring of USAALS into a maintenance training activity is certainly a positive step towards posturing our forces to meet the needs of our changing world. Throughout the transition and after, opportunities in the aviation logistics world of electronics, computers, precision tools, and automatic test equipment will be numerous. The highly skilled soldiers trained at USAAMTA will ensure that we have a ready force to succeed across the operational continuum of peace, crisis, and war. They will propel Army Aviation into the 21st century.

The rest of this ***Aviation Digest*** issue pertains to matters concerning a region in the world where the cold war and communism thrives: Korea. Our Army is adapting to change in a new strategic environment. While we focus on contingencies and operations other than war, in Korea, we continue a standoff in a war that has never ended. In the region around the 38th Parallel, we continue to focus on a potential conflict in a mature and well–developed theater against a defined and imposing opponent—an opponent that seeks the power of nuclear weapons. This is a country where an American soldier on border duty can occasionally glimpse the bright reflection off his enemy's well–oiled and ready assault rifle—a region where the distance separating you and the enemy can be measured in meters: Korea.



VIEWS FROM READERS



Aerial Refueling

I found Colonel (COL) (Retired)(R) Joe E. Hannan's ideas expressed in his article "Aerial Refueling: An Army Requirement for the AH–64 Apache?" (March/April 1993 issue) interesting. However, I disagree with his contention that an aerial refueling capability would greatly enhance the AH–64's mission capability.

It would indeed improve the Apache's capability to self–deploy. However, aerial refueling takes place at a safe altitude in a "protected" sector of airspace. During an attack mission, the time it would take to fly back and/or up to aerial refuel would probably take longer (and be more dangerous) than simply visiting a forward arming and refueling point (FARP) or taking along a "Fat Cow" (a CH–47 Chinook configured for refueling aircraft on the ground).

Furthermore, COL(R) Hannan referred to the increased chance of system failures when aircraft are shut down as support for aerial refueling; however, we habitually "hot refuel" our aircraft for turnaround missions.

CPT Paul M. Steele
Alexandria, VA

Aviator/Logistician Update

This information updates the article "Aviator/Logistician" in the January/February 1993 issue of the ***Aviation Digest***. After the article was submitted for publication, the Combined Logistics Course became a prerequisite for participation in functional area 90 (FA90). The answer then to question number 15 is now "yes." In addition, there have been questions from the field concerning the opportunity to compete for battalion command in both Aviation and multifunctional organizations, and the potential failure to meet "gate," i.e., flight pay requirements.

While it may not be impossible to command in both fields, the number of available opportunities coupled with the limited short timeframe within a career make it highly unlikely one could secure multiple battalion commands. As to the "gate" or flight pay issue, if an officer continues to serve in Aviation assignments until the rank of major, he or she will meet the 12–year gate requirements. Remember, 18 months, of FA90 time are required as a major and 48 cumulative months as a lieutenant colonel (6 months of approved schooling may be substituted) to remain qualified. There is risk, however, as with participation in any FA, assignment to Department of the Army staff, Reserve Officer Training Corps duty, etc., that the 18–year gate may not be met. Likewise, under the new Aviation Career Incentive Pay rules, i.e., 9 of 12, and 12 of 18, there is less maneuver room. Some officers will undoubtedly have to make a choice!

MAJ William M. Gavora
Aviation
Director, Leader Development/Personnel Proponency Office
Fort Eustis, VA

HTIS Function

Hazardous technical information services (HTIS) is a technical support function, operated by the Defense Logistics Agency (DLA), that provides professional consultation services, free of charge, to Department of Defense (DOD) personnel worldwide. HTIS focuses on preventing occupational illness/injury, and on protecting the environment by providing information on the management of hazardous ma-

terials. Specifically, HTIS provides responses to questions from DOD on safety, health, transportation, storage, handling, regulatory, disposal, and environmental considerations of hazardous materials and wastes. However, services are not restricted to DOD. Other Federal agencies may use HTIS if an item in question was formerly DOD–owned or –managed.

HTIS publishes a quarterly bulletin to keep DOD personnel informed of current technical and regulatory developments, as well as education and training related to hazardous materials and waste.

For telephone inquiries call HTIS at DSN 695–5168, commercial 804–279–5168, or toll–free 1–800–848–HTIS. A professional in chemistry, chemical engineering, industrial hygiene, or environmental science will respond to your inquiry.

Mr. Leonard S. Lambert
Directorate of Technical Operations
DLA
Richmond, VA

AAAA Symposium

The Army Aviation Association of America's (AAAA's) Aviation Electronic Combat (AEC) Symposium will be held 2 through 3 November 1993 in Melbourne, FL. The theme for the symposium is "AEC—Combat Multiplier for Tomorrow's Battlefield Today." Grumman Melbourne Systems, a division of Grumman Corporation, will host this year's Symposium at the Holiday Inn Melbourne Oceanfront.

The AEC Symposium is open to all interested AAAA members who possess, as a minimum, a SECRET level clearance.

For further information, contact AAAA, 49 Richmondville Avenue, Westport, CT 06880–2000, phone commercial 203–226–8184, or FAX 203–222–9863.

Aviation Symposium

From 2 through 4 November 1993, the U.S. Army Aviation and Troop Command (ATCOM) and the St. Louis Chapter of the American Helicopter Society (AHS) are hosting an Aviation Industry Day Symposium at the Henry VIII Hotel and Conference Center, 4690 North Lindbergh Boulevard, St. Louis, MO. The theme of the symposium is "Army Aviation of the 21st Century" and will feature planning information for the Aviation Science and Technology Program.

For more information, contact Mr. Ed Branhof at commercial 314–263–3050 or FAX 314–263–3271.

Mr. Thomas L. House
Executive Director, Aviation Research, Development, and Engineering Center
U.S. Army ATCOM
St. Louis, MO

Writing Contest

After a hiatus of over a year, the Army's Military History Writing Contest is back on track for 1993. Sponsored by the U.S. Army Center of Military History, Washington, DC, the history writing contest is a professional development exercise designed to improve young officers' and noncommissioned officers' communication skills and enhance their knowledge of the profession of arms. Winners receive cash awards and Department of the Army certificates of achievement.

Rules for the 1993 contest are the following:

• **Eligibility**: Participation is limited to students attending officer advanced courses and the Sergeants Major Academy during calendar years 1992 and 1993. **Eligibility has been extended back to 1992 because the contest was not held last year**. Include social security number, Sergeants Major Academy or advanced course title, course number, and a forwarding address.

• **Entries**: Submit two copies of previously unpublished manuscripts, maximum length 3,500 words (about 14 pages), typed, and double–spaced. **ENTRIES THAT EXCEED THE MAXIMUM ALLOWED LENGTH WILL NOT BE JUDGED**. Documentation is required but footnotes and endnotes are not included in length. Submit graphics, illustrations, or photographs as if the article will be published.

• **Topics**: Essays should develop a limited historical theme related to the Army. Some suggested topic areas are—

1) Analysis of World War II (WWII) or Korean War battles and campaigns. (Note this is the period of the 40th anniversary of the Korean War and the 50th anniversary of WWII.)

2) The Black experience during the Civil War, Spanish–American War, WWI or II, Korea, Vietnam, etc.

3) Fighting outnumbered and winning, e.g., Ardennes, Korea, and Vietnam.

4) Light Infantry, airborne, armor, artillery, or other forces.

5) Logistics, leadership, training, unit cohesion, or stress in combat.

6) Desert operations.

• **Deadline**: Entries must be postmarked by midnight 31 December 1993 to the U.S. Army Center of Military History, ATTN: DAMH–FI (Writing Contest/Mr. Arthur), 1099 14th Street N.W., Washington, DC 20005–3402.

• **Judging**: Papers will be judged by a panel of military historians, using the following criteria: historial accuracy, originality, style, and relevance to current Army issues. Contest winners should be announced by the end of April 1994.

• **Prizes**: 1st—$500 and publication in **Army History**; 2d—$250; 3d—$100, or as the judges direct.

For additional information on the contest, contact Mr. Billy Arthur, U.S.

Army Center of Military History, 1099 14th Street, N.W., Washington, DC 20005–3402; telephone DSN 285–5368; or commercial 202–504–5368.

WRASS Course Info

The Western Region Aviation Survival School (WRASS) Courses (listed below) emphasize special interest in aviation life support equipment (ALSE) training. A responsibility of ALSE officers and technicians graduates is to return and teach the hands-on use of ALSE in an on–the–ground survival situation.

Training focuses on escape, evasion, and self–initiated recovery. Attendees learn the safe combat survival skills of locating water, food, concealed shelter, and accurate routes of travel.

Mobile training team courses can be scheduled to meet training needs in all states. Normal scheduling should be done 90 days in advance. An URGENT course can be scheduled upon request. College credits are given and may be applied to the civilian educational requirements outlined in Army regulations and National Guard Bureau (NGB) Regulation 600–100.

Course tuition payment is made using Department of Defense Form 1556, Authorization Agreement, Certification of Training and Reimbursement, or NGB Form 64, Application for Training.

Application to the WRASS should be in accordance with DA Field Manual 1–508, page 8–8.

Questions on combat survival school training may be directed to the school director of training at commercial 503–636–6254.

COURSE DATES*	COURSE TITLE	CLASS NO.
13 through 24 Sep 93	Survival Instructor/ (Portland, OR)	9399
10 through 14 Jan 94	Cold Climate Survival/ (Ely, MN)	9400
17 through 21 Jan 94	Cold Climate Survival/ (Ely, MN)	9401
07 through 11 Feb 94	Cold Climate Survival/ (Ely, MN)	9402
16 through 18 Feb 94	Over Water/(Portland, OR)	9403
14 through 18 Mar 94	Basic Land/(Portland, OR)	9404
21 through 25 Mar 94	Basic Land/(Portland, OR)	9405
11 through 15 Apr 94	Combat Aircrew Survival/ (Marana, AZ)	9406
18 through 22 Apr 94	Combat Aircrew Survival/ (Marana, AZ)	9407
09 through 11 May 94	Over Water/(Portland, OR)	9408
16 through 18 May 94	Over Water/(Portland, OR)	9409
13 through 17 Jun 94	Basic Land/(Portand, OR)	9410
20 through 24 Jun 94	Basic Land/(Portland, OR)	9411
11 through 13 Jul 94	Over Water/(Portland, OR)	9412
18 through 20 Jul 94	Over Water/(Portland, OR)	9413
12 through 23 Sep 94	Survival Instructor/ (Portland, OR)	9414

***Travel time not included**

ARMY AVIATION KOREA— 40 YEARS OF PEACE

Ever vigilant, U.S. Army Aviation soldiers man their equipment and train diligently in preparation for conflict. Around the world, our Army can be found in places of need...and there, too, is Army Aviation. Perhaps no place better reminds us of the need for combined arms readiness than here in the Eighth United States Army (EUSA). Still holding on to the vestiges of communism and led by the unpredictable Kim Il Sung and his son, Kim Jung Il, North Korea remains a serious threat to the regional stability of northeast Asia and to world peace.

The EUSA stands ready to win. Every day, the duty performance of our aviation soldiers, tankers, infantry, artillery, and America's finest support troops sends a message to those who would prey upon their neighbors: "You're gonna lose if you try." Army Aviation is the decisive edge that we have over North Korean battlefield capability. The combat power of the EUSA Aviation Force and the Combined Aviation Force is awesome. Firepower, mobility, and the flexibility to deal with nearly any situation resides in our aviation. Aviation modernization programs, both within the EUSA and the Republic of Korea Army, will continue to assure this qualitative advantage.

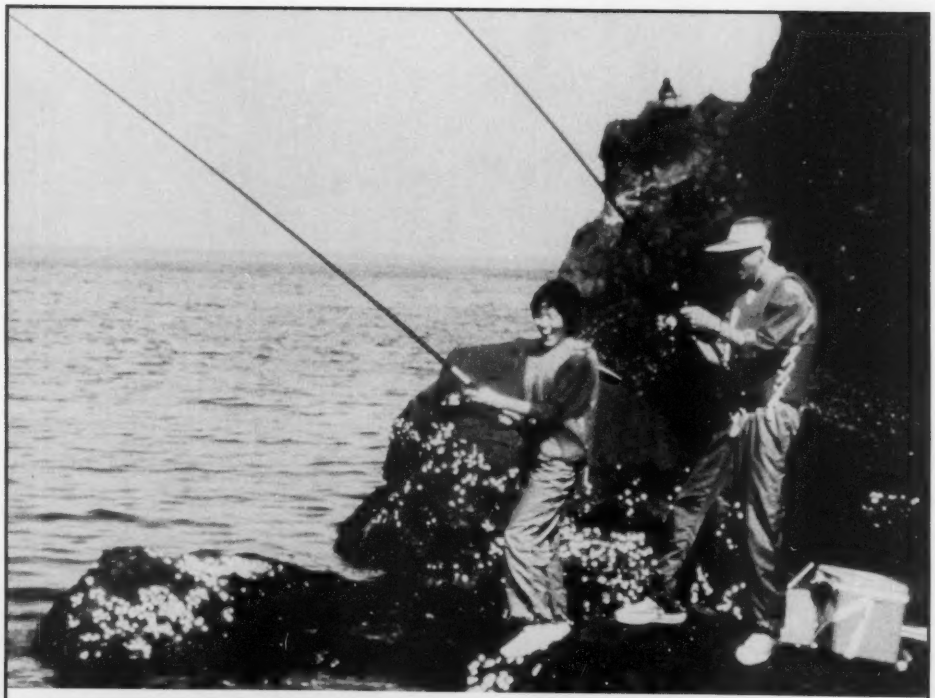
I am happy to have this opportunity to share the EUSA Aviation story in this edition of the ***Aviation Digest***. For the many readers who have never served in the Republic of Korea, I hope this will help you understand some of the professional challenges available in the EUSA. For those who have served here, things have changed so much that you will enjoy catching up. In either case, the articles come from the aviation troops themselves—your counterparts. I know that you will find the information interesting.

Keep up the good work Army Aviation. Your service is greatly appreciated.

William W. Crouch
Lieutenant General, U.S. Army
Commander, Eighth U.S. Army
Chief of Staff, United Nations Command
Combined Forces Command, and U.S. Forces Korea

Safeguarding the Skies "Round the Clock"

...Soldiers of the 4-58th Aviation Regiment direct aircraft at a tactical assembly area in South Korea.



Chicken

BRING YOUR CAREER TO KOREA!

Colonel Johnnie L. Shepherd
Army Aviation Operations Officer
Combined/Joint/G3, Combined Forces Command
Ground Component Command, Combined Forces Command
U.S. Forces Korea, Eighth U.S. Army
Republic of Korea

If you have been listening to the news, you know about the serious issues in our dealings with the North Koreans. As the last vestige of the Cold War—yes, the one that everyone claims we won—North Korea has not accepted the reality of the impending failure of the communist dogma.

Along the world's most heavily armed and fortified border, the demilitarized zone (DMZ), the potential for conflict presides quietly over daily life.... For 40 years, "Armistice" has existed, with occasional violations resulting in moments of grave concern. The tension from this situation is imposed over some of the most rugged terrain imaginable and a climate given to extremes.

Now you begin to understand the serious need for equipment readiness, soldier conditioning, and a strong Army Aviation combat maneuver force in this country. All of these elements factor in making an assignment to the Republic of Korea (ROK) and, especially the Eighth U.S. Army (EUSA), a great professional challenge.

Every day, more and more, assignment officers are sending aviation soldiers for their first tour of duty in the ROK. This information about EUSA should assist you in gaining a perspective of the units here and in deciding to make a tour in Korea a credit in building your aviation career.

Five major subordinate commands in EUSA have aviation units. The 17th Aviation Brigade, the theater aviation brigade, has five subordinate battalions (figure 1). The brigade is unique in the U.S. Army because it merges, on order, with the ROK Army (ROKA) Aviation Command to form the Combined Aviation Force (CAF). The commander of the CAF is a ROKA major general and the 17th Aviation Brigade commander is the deputy commander of the CAF. The CAF provides the Ground Component Command (GCC) of the Combined Forces Command (CFC) a responsive and lethal aviation combat capability. In the coming year, force modernization programs will replace the two U.S. AH–1F Cobra battalions with AH–64A Apache battalions. A force to be reckoned with, the

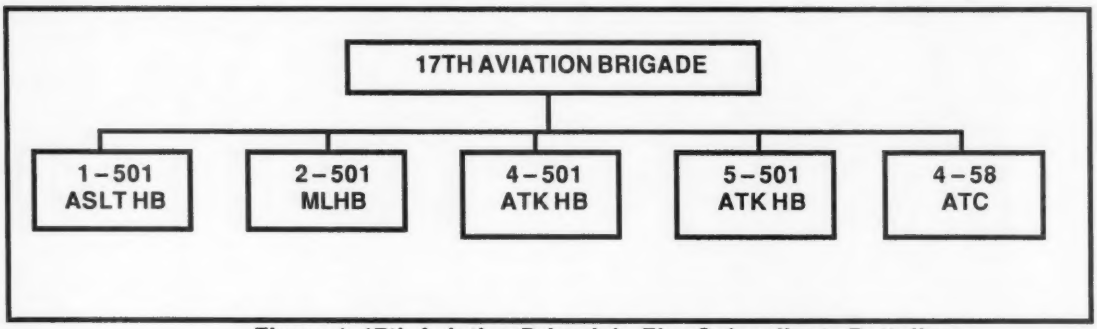


Figure 1. 17th Aviation Brigade's Five Subordinate Battalions

CAF can field more than 300 attack and assault helicopters on short notice.

The Combat Aviation Brigade, 2d Infantry Division (Mechanized), appears to be a standard divisional aviation unit (figure 2). Although the division has no AH–64As today, its C–Nite Cobras have proven to be superb night fighters. Modernization of the 5–17th Cavalry will result in the addition of the OH–58D Kiowa Warrior by the end of fiscal year 1994.

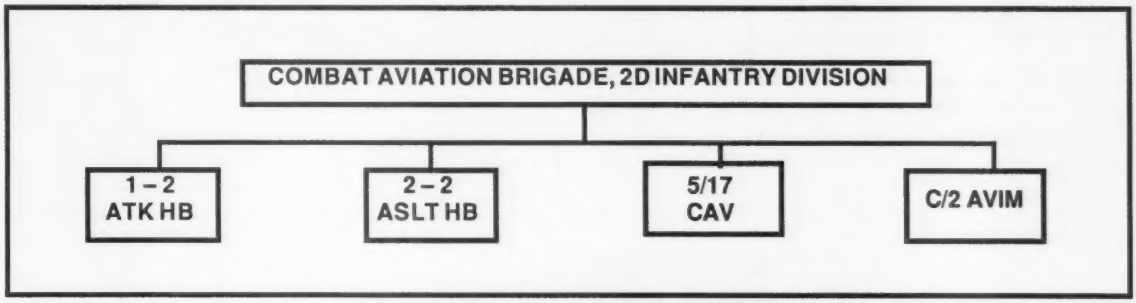


Figure 2. Structure of CAB's 2d ID Division

The 501st Military Intelligence (MI) Brigade, attached to the EUSA from the U.S. Army Intelligence and Security Command, is our eyes and ears (figure 3). The 3d MI Battalion aerial exploitation (AE) often has aircraft in the air every hour of the day, every day of the week. Aerial exploitation at its finest, the 3d MI keeps the EUSA well supplied with information. Also, the Phoenix Platoon, 751st MI Battalion, is always ready to respond to support requirements. The 501st MI aviation—keeping the EUSA honed to the cutting edge of reality.

Life or death—that is the business of the 377th Medical Evacuation (MEDEVAC) Company (figure 4). Subordinate to the 52d Medical Battalion, the unit fields 25 UH–60 Black Hawks at four locations and meets aircraft readiness standards with only an aviation unit maintenance (AVUM)-level organic maintenance capability. "DUSTOFF" can be counted on when an emergency occurs—anytime, day or night—"you call and they haul." No job is too tough for them when the health of our troops and families is at stake.

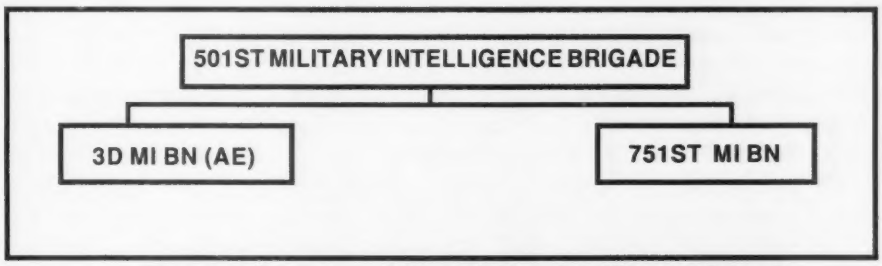


Figure 3. Structure of 501st Military Intelligence Brigade

Recently, one DUSTOFF crew saved a squad of ROK soldiers trapped by a forest fire on the top of a mountain. Landing on the mountain was impossible; however, the crew lowered a medic, by winch and cable, to them. The medic administered first aid to one unconscious soldier. Meanwhile the helicopter crew provided directions by survival radio for the safe escape of the squad and medic to the valley below and to medical attention needed. Just another workday for MEDEVAC in Korea.

The theater aviation intermediate maintenance (AVIM) is aligned with the 19th Support Command under the 23d Area Support Group. The 3d Battalion, 501st Aviation, is a Reserve Component unit (figure 5); therefore, the two AVIMs are assigned to the 194th Maintenance Battalion. A Company, 3–501st Aviation, provides maintenance support to all of EUSA's aviation units. B Company, 3–501st Aviation, will be activated in December 1993, giving the capability to maintain AH–64As. Also keepers of the theater spare aircraft account, these maintainers are warfighters through and through.

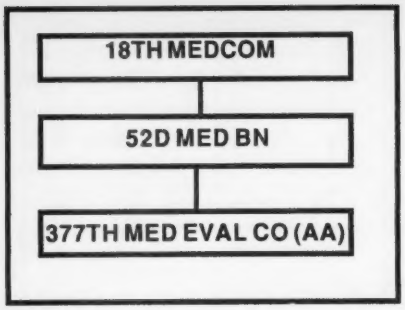


Figure 4. Two Subordinate Elements of the 18th Medical Command

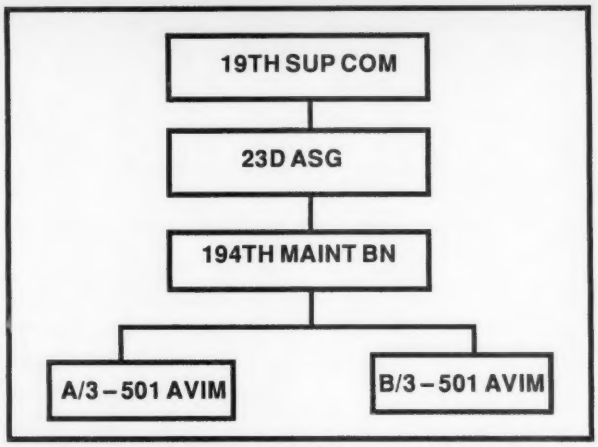


Figure 5. Theater AVIM Support Elements

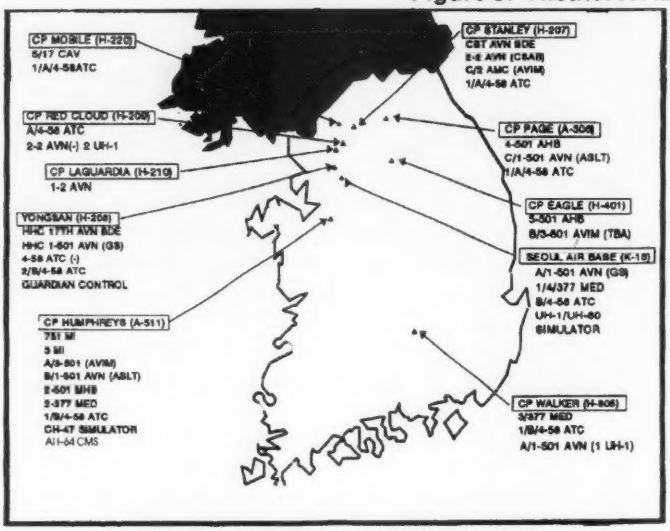


Figure 6. U.S. Army Aviation in Korea

To "wrap up" this introduction to Korea, it is important to recognize one other aviation element in the EUSA—the EUSA G3 Aviation Division. The division is composed of three branches: Flight Standards, Air Traffic Control (ATC), and Flight Simulator. The EUSA Aviation officer also "wears three other hats," within the joint and combined staff, serving as the Army Aviation operations officer in CFC, GCC, and the U.S. Forces Korea (USFK).

These great soldiers and civilians are seen among the Crisis Action Team and the Battle Staff during training exercises, or when situations dictate. Routinely, however, they maintain a high operational tempo daily in providing assistance to unit aviation standardization officers and managing the EUSA's aviation programs.

An important program is the Aviation Resources Management Survey (ARMS), which helps commanders see their unit strengths and weaknesses. More importantly, these soldiers and civilians solve problems when needed. Another program is Air Traffic Control (ATC) ARMS, which assures air traffic controllers are ready; airspace management procedures are understood and followed; and the aviation force is safe. Korea can be a fatal experience for the disoriented aircrew. Taking resources "out of hide," a small staff provides aircrew coordinator instructor training and new aviator orientation classes—flight simulator training. Korea is a most hazardous environment for aviation, but we hold to the principle that there is "SAFETY in STANDARDS."

I have shared some of the information that you should know about EUSA Aviation (figure 6). Call that assignment officer and ask him to put your career in Korea where the flying is great, the mission meaningful, and the experience absolutely the best available in today's Army.

Combined Aviation Force—The CINC's Most Potent Combat Multiplier in the ROK

Lieutenant Colonel Garry McNiesh
Executive Officer, 17th Aviation Brigade and
Chief of Staff, Combined Aviation Force
Republic of Korea

Although Desert Storm is over and the conflict in Bosnia–Herzegovina is still uncertain, the 40–plus year conflict in the Republic of Korea (ROK) remains tempered only by an armistice.

Vigilance is the name of the game here as the North Korean Army, the 5th largest in the world, remains poised just north of the 38th Parallel, ready to strike at a moment's notice. The "North's" recent withdrawal from the Nuclear Non-Proliferation Treaty only intensifies this already tense situation.

It is in this politically provocative environment that the Combined Aviation Force (CAF) trains for a fight. The concept of the CAF, first developed in 1982, was tested and evaluated in 1984. A Memorandum of Agreement (MOA) was drawn up as a result. Since that time, the CAF has gone through a series of MOA refinements until its final update in May 1993.

Think of the CAF as a combined forces team.... The CAF consists of two organizations—the ROK Army (ROKA) Aviation Command, commanded by a ROK major general, and the 17th Aviation Brigade, commanded by a U.S. Army colonel. When the CAF is formed, only during exercises and war, it falls under the Ground Component Command (GCC): one of the five component commands (figure 1) supporting the Combined Forces Command (CFC).

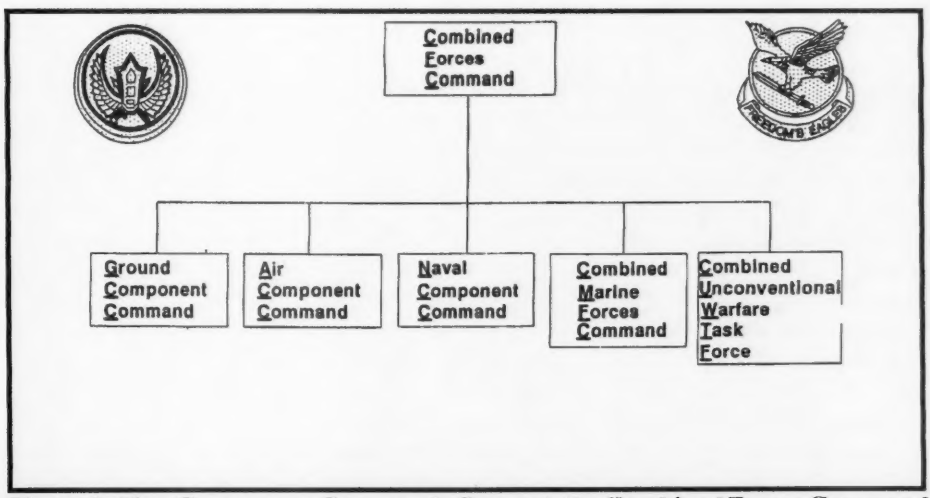


Figure 1. Five Component Commands Support the Combined Forces Command

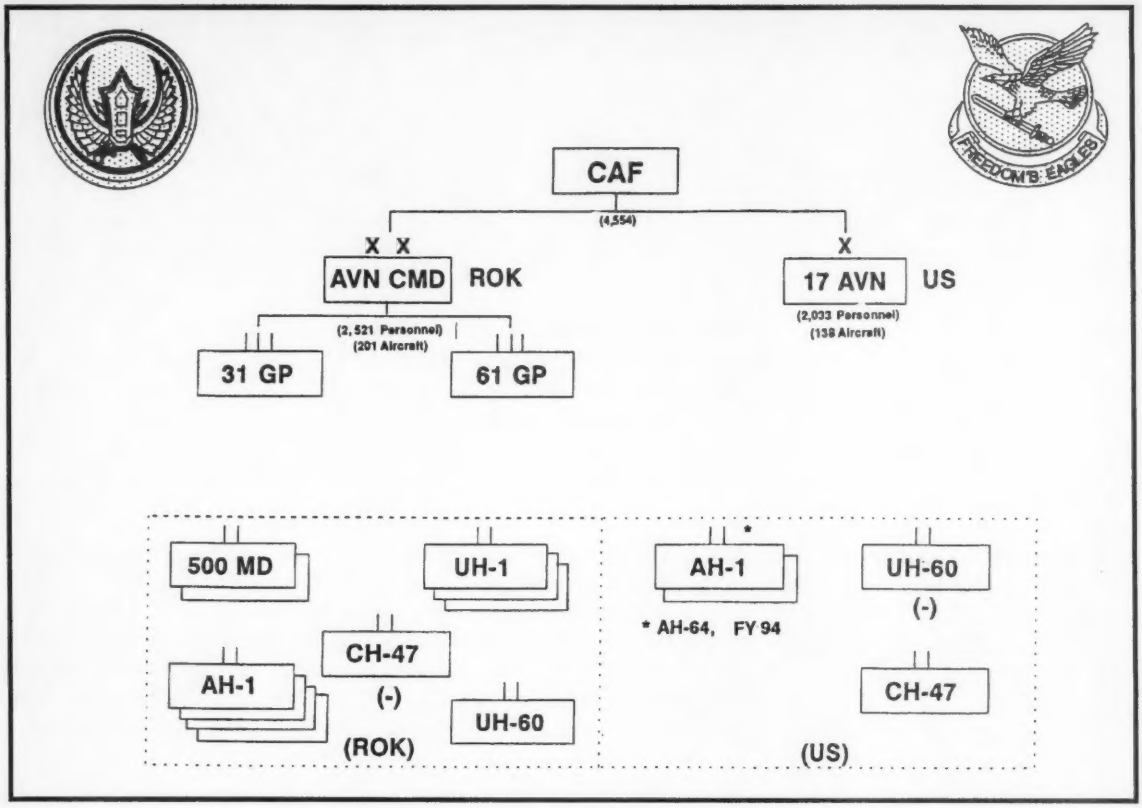


Figure 2. Combined Aviation Force Organization

While supporting CFC operations across the peninsula, assets combined from both the ROKA Aviation Command and the 17th Aviation Brigade produce a division–level aviation unit (figure 2), which is the largest combined aviation structure of its kind today. Organized into 14 battalions with nearly 340 aircraft and more than 4,500 personnel, the CAF is commanded by the ROKA Aviation Command commander. The 17th Aviation Brigade commander becomes the deputy commander. The brigade executive officer becomes the CAF Chief of Staff. Both commanders command their organic forces along national lines. In addition, ROK and U.S. staffs are combined throughout the organization.

Although the CAF's primary mission is killing tanks, it also conducts a number of other missions including air assault, air movement, reconnaissance and security, command and control, medical evacuation and Special Operations Forces (SOF) Aviation for the Combined Unconventional Warfare Task Force (CUWTF). The CAF, formed during war or for major exercises, is centrally controlled, as mentioned earlier, by the GCC. Once missions are received and analyzed, units are task organized into task force structures for decentralized mission planning and execution. This concept is practiced on a weekly basis through standardized air assault and joint air attack team (JATT) training with ROK and U.S. units alternating duties as the air mission commander.

CAF mission flow procedures and wartime mission support are

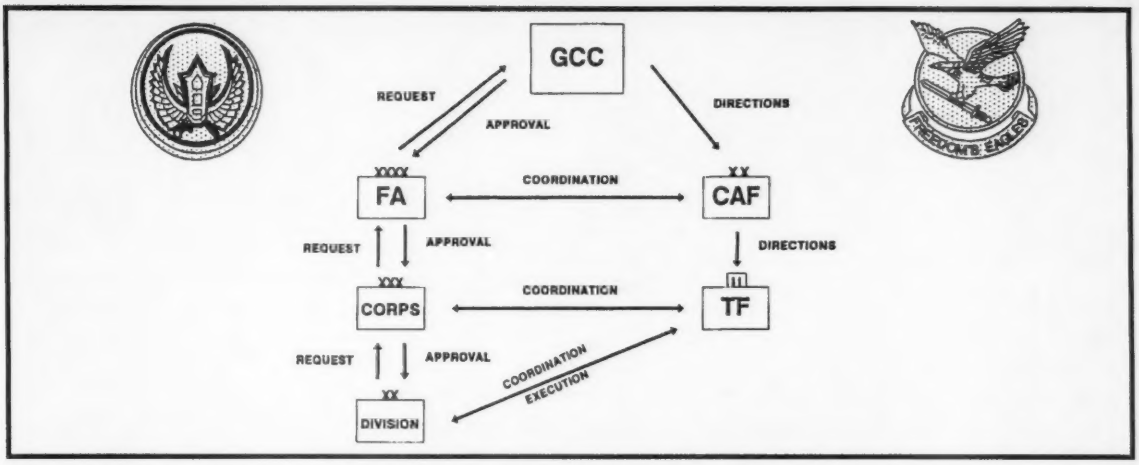


Figure 3. Combined Aviation Force Mission Flow Procedures

shown in figures 3 and 4. Once a mission is requested by the Field Army and approved by the ground component commander, it is sent to the CAF. At the CAF, the mission is analyzed through the staff estimate process, risks are assessed, and task organization is determined. Then, the mission is assigned to the designated Task Force commander for detailed planning, coordination, and execution with the supported corps or division. During the process, coordination and feedback at every level is an absolute necessity. Wartime support is normally focused on the forward field armies—Third ROK Army (TROKA) and First ROK Army (FROKA), with attack helicopter battalions operationally controlled (OPCON) to each.

Support to the Second ROK Army (SROKA), which covers two–thirds of the peninsula, involves such missions as combat service support, evacuation, air movement, or rear area operations. The point to be made here is that several CAF task forces could be formed at one time, depending on the enemy's intentions and requirements of support to the ground component commander.

The CAF has had the opportunity to examine these mission flow procedures and wartime mission support in the past 10 months with its participation in these three major annual combined exercises: ULCHI FOCUS LENS '92, FOAL EAGLE '92, and TEAM SPIRIT '93.

All three allowed the CAF to support the varied missions of the CFC and the Commander in Chief (CINC) with deep attack helicopter operations, regimental-sized air assaults, single or dual ship CUWTF missions, and rear–area operations against simulated Opposing Forces (OPFOR) Special Forces, to name a few. In all cases, the CAF allows the CINC to exploit the third dimension of maneuver. The CAF provides him with the ability to overcome the many severe terrain restrictions of the ROK, thereby placing troops on the ground and steel on targets.

The CAF is a critical element of combat power to the CINC—his most versatile combat multiplier to support each Field Army and contribute to the achievement of national defense goals in the ROK. As a large and lethal organization providing the CINC with a significant force of attack, assault, cargo, and observation aircraft, the CAF trains as it will fight—combined. The CAF is proud and ready for our watch...which never ends on **Freedom's Frontier.**

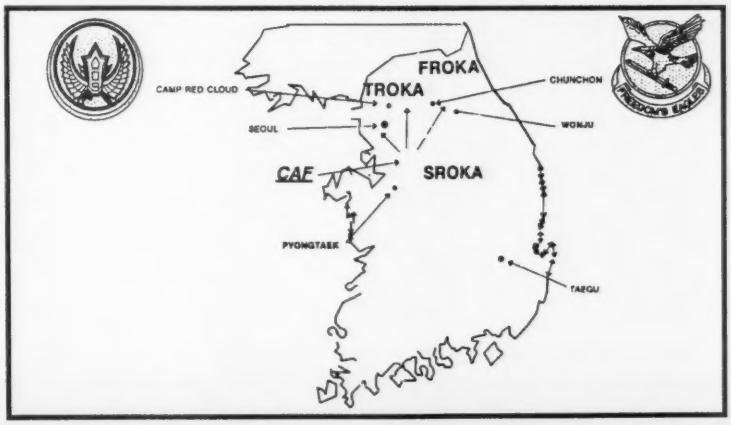


Figure 4. Combined Aviation Force Wartime Mission Support Areas

Team Spirit '93

Aviation Operations In South Korea

The 17th Aviation Brigade took part in Team Spirit '93 from 1 to 18 March 1993, as part of the Combined Aviation Force (CAF). Team Spirit '93 was a Republic of Korea (ROK)/U.S. Joint Chiefs of Staff-directed, U.S. Pacific Command (USPACOM)-sponsored, combined/joint field training exercise, command field exercise, and command post exercise (FTX/CFX/CPX) conducted by United Nations Command/Combined Forces Command from 21 January to 21 April 1993.

The intent of the exercise was to increase combat readiness and interoperability of ROK and U.S. forces through training in combined/joint air, ground, sea, amphibious, and unconventional warfare operations. The exercise consisted of three phases: strategic deployment, employment, and strategic redeployment. The exercise actually began before D-Day, with the employment of Combined Unconventional Warfare Task Force (CUWTF) infiltrations into the maneuver box.

Team Spirit was a force-on-force, controlled, free-play exercise featuring the FTX/CFX/CPX concept. Two opposing field armies commanded five corps. Field Army Blue in the west fought one corps in an FTX/CFX mode, and two corps in a simulation-driven CPX, using the Corps Battle Simulation (CBS) model.The opposing force, Field Army Orange, in the east fought one corps in an FTX/CFX mode, and the 10th Allied Corps (CFC Battle Simulation Center) Opposing Force (OPFOR) in the CPX mode.

The combined naval and marine forces supported the land war by seizing objectives in the Amphibious Objective Area (AOA) and in the vicinity of Maeng Bang Ri.Combined naval operations were active in the AOA and in blue water areas around the Korean peninsula. A theater-wide joint and combined air operation was conducted to support both field armies. Unconventional warfare operations were also conducted in support of both field armies.

The CAF was tasked to support both field armies with priority of support going to the force on the offensive. Since CUWTF also supported both sides, the CAF was actively involved in supporting their infiltration and exfiltration missions throughout the exercise.

Most actively involved in the exercise were attack helicopter battalions (AHBs) of the CAF. The six AHBs that took part in the FTX had missions every day of the exercise. The lift battalions, although not as actively involved on a recurring basis, did have significant opportunities to plan and execute air assault and air movement missions.

The exercise presented the opportunity for the CAF to conduct two atypical night missions. One was a night, cross-FLOT, deep attack/air assault-type raid supporting the 75th Ranger Regiment against the Orange Force high-priority targets. The other was a Night Joint Air Attack Team (JAAT), which was conducted by the 4-501st Aviation in a cross-FLOT mission targeted against an OPFOR tank brigade.

This mission was conducted in coordination with U.S. Air Force LANTIRN-equipped F-16 aircraft. Both missions were well coordinated and flawlessly executed, demonstrating the capability and flexibility of Army Aviation on the battlefield.

Besides CAF participation in the FTX portion of the exercise, a gaming cell, which represented the CAF, participated in the CPX Battle Simulation Center (BSC) at Walker Center in Yongsan. The CAF gaming cell consisted of representatives of the 17th Aviation Brigade and the ROK Army Aviation Command.

Four U.S. officers and four ROK officers performed duty in the BSC and initially planned to play one representative CAF task force, which consisted of two AHBs and one assault helicopter battalion. The original intent, by direction of the BSC exercise directive, was to use the task force to support both Orange and Blue Forces. This presented problems for the computer simulation model. A decision was made to place a notional OPFOR aviation force OPCON to the CAF gamers to play as the Orange Aviation Force supporting a notional 10th Corps (OPFOR). The CAF gaming cel performed well in supporting the CPX portion of the exercise. All missions for the CPX(BSC) were passed as normal mission requests to the CAF C^3 and were passed to the CAF gaming cell. CPX play was transparent to the overall exercise and was briefed as part of the overall exercise.

During Team Spirit '93, the 17th Aviation Brigade flew a total of 2,601 hours, spread among six different airframes. Of that figure, over 500 hours were flown in support of the Joint Visitors Bureau (JVB). The JVB is an administrative function activated during major exercises in the Republic of Korea. It provides VIP support to the many visitors and support personnel on the peninsula for Team Spirit.

Team Spirit '93 provided the opportunity for the CAF staff to actively take part in the planning, coordination, and execution of a number of combined and joint aviation operations. This exercise represented the first opportunity for the CAF staff and subordinate battalions to actually plan and execute aviation operations in support of ground units against an actual OPFOR.

Aviation Operations in Korea

Colonel John K. Schmitt
Commander

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This article highlights the missions and employment concepts of, and lessons learned by, the Aviation Brigade, 2 (U.S.) ID, during Team Spirit '93. Although it does not break significant new ground, it provides insight into the operations and warfighting of the Aviation Brigade, 2 (U.S.) ID, in the Republic of Korea (ROK).

We write about and practice the art of WAR during peacetime to prepare ourselves for future conflict.

Introduction

Team Spirit '93 displayed the central role of aviation and the Aviation Brigade, 2 (U.S.) Infantry Division (ID), as a combined arms maneuver force in the Republic of Korea (ROK).

The brigade fought as a true maneuver brigade under 2 (U.S.) ID and II (ROK) Corps with operational control (OPCON) U.S. and ROK Combined Aviation Forces (CAF). The brigade faced many challenges and lessons learned that will impact on divisional war plans and training for years to come.

Orange and Blue Forces

Team Spirit '93 began with Orange and Blue Forces in a hasty defense. Blue Forces had initiated hostilities days earlier.

Orange Forces were now preparing to attack against the Blue Forces (figure 1). Orange Forces, commanded by

2 (U.S.) Infantry Division Patch

II (ROK) Corps, were comprised of 2 (U.S.) ID, one ROK infantry division, one ROK motorized division, and one ROK armor brigade during the offensive phase of operations (9 to 12 Mar 93). During the defensive phase of operations (14 to 18 Mar 93), the ROK armor brigade was not assigned to

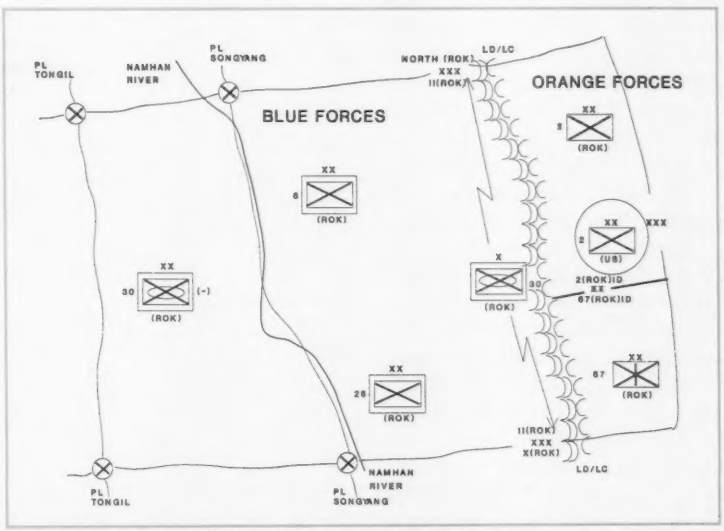


Figure 1. Operational laydown for the offensive phase

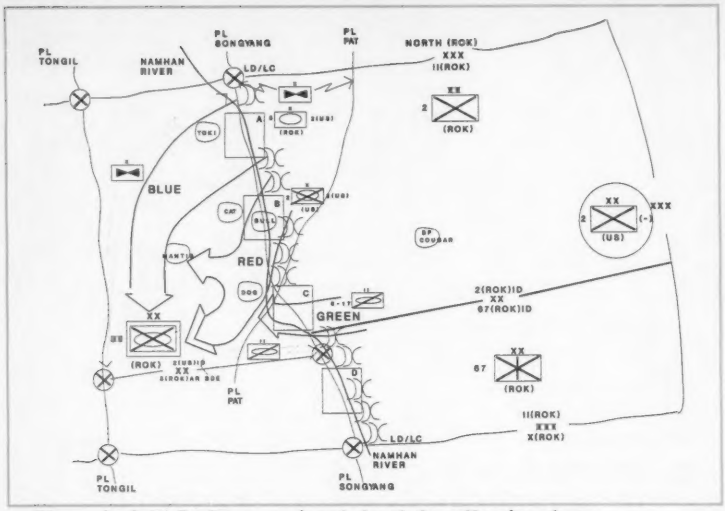


Figure 2. 2 (U.S.) ID operational sketch for offensive phase

II (ROK) Corps. Blue Forces, commanded by I (U.S.) Corps, consisted of two ROK infantry divisions and the 30 (ROK) Mechanized Division in the offense and also included the 2 (ROK) Armor Brigade in the defense.

Throughout the offensive and defensive phases, 2 (U.S.) ID served as the II (ROK) Corps reserve, conducting the corps main attack in the offense and the corps counterattack in the defense.

First Phase—The Offense

In the first phase of Team Spirit '93—II (ROK) Corps in the offense—2 (U.S.) ID's mission as the corps main effort was conducted in four operational phases: Phase I—Tactical assembly area (TAA) occupation and movement; Phase II—river-crossing operations and forward passage of lines; Phase III—attack in sector to destroy the I (U.S.) Corps center of gravity,the 30 (ROK) Mechanized Division (figure 2); and phase IV—end state.

The Aviation Brigade missions covered the entire framework of the battlefield during these phases: deep, close, rear, security, and reserve operations.

The brigade was task-organized (figure 3) to execute deep attacks, air assaults, and hasty attacks in support of ground maneuver brigade close operations; screen of the division's flank during the attack, counter-reconnaissance (CR) patrols in the division rear area (DRA); employ the tactical combat force (TCF) against Level II+/III threats, and establish the division reserve.

The Aviation Brigade conducted its missions throughout the depth of the battlefield based on the concept of operation outlined in figure 4.

Without a U.S. Corps intelligence support system, the Aviation Brigade became 2 (U.S.) ID's and II (ROK) Corps' primary source for locating the 30 (ROK) Mechanized Division, seeing the battlefield, and developing the situation for employment of 2 (U.S.) ID.

This intelligence collection requirement led to a new and challenging mission for the brigade—attack helicopter battalion deep and close armed reconnaissance operations. The armed reconnaissance, coupled with multiple launch rocket system (MLRS), calls for fire and attack helicopter hasty attacks, identified and seriously attrited the 30 (ROK) Mechanized Division.

Attack helicopter deep operations (routes, suppression of enemy air defense (SEAD), and tactical air

AVIATION BRIGADE
TASK ORGANIZATION

1-503 IN BN(-) (OPCON)	BDE CONTROL SCT PLT/1-506 IN TARP/C/2-2 AVN (AHB) 4/D/122 SIG DET/A/4-58 ATC
1-506 IN BN(-) (OPCON)	
1-2 AVN (ATKHB)(C-NITE)	
109 (ROK) AVN (ATKHB)(OPCON)	AVN BDE TNS C/2 AVN (AVIM) D/1-2 AVN (AVUM) D/2-2 AVN (AVUM) F/5-17 CAV (AVUM)
CAF (US) AVN (ATKHB)(O/O OPCON)	
2-2 AVN (AHB)(-)	
A/1-72 AR (O/O OPCON)	

Figure 3. Aviation brigade task organization for offensive operations

AVIATION BRIGADE
CONCEPT OF OPERATION

DEEP OPERATIONS: AVIATION BRIGADE SUPPORTS DEEP OPERATIONS THROUGH RECONNAISSANCE, TARGET ACQUISITION AND DEEP ATTACKS TO DESTROY 30(ROK)ID(M). ON ORDER, TARP/C/2-2 AVN (AHB) CONDUCTS RECONNAISSANCE OPERATIONS TO LOCATE 30(ROK)ID(M) MECH/ARMOR FORCES; ON ORDER, CONDUCTS RECONNAISSANCE/TARGETING OPERATIONS IN SUPPORT OF DEEP ATTACKS TO ATTRIT THE 30(ROK)ID(M) MECH/ARMOR FORCES. ON ORDER, 1-2 AVN (ATKHB) CONDUCTS DEEP ATTACK OPERATIONS TO ATTRIT MECH/ARMOR FORCES OF THE 30(ROK)ID(M); BE PREPARED TO ATTACK TO ATTRIT THE DIVISION ARTILLERY OF 30(ROK)ID(M).

CLOSE OPERATIONS: AVIATION BRIGADE CONDUCTS CLOSE OPERATIONS EMPLOYING AIR ASSAULT AND ATTACK HELICOPTER ASSETS TO SUPPORT THE DIVISION ATTACK IN ZONE. ON ORDER, 2-2 AVN (AHB) AIR ASSAULTS 1-503 IN BN(-) TO SEIZE OBJ DOG IN SUPPORT OF 2D BDE RIVER CROSSING; BE PREPARED TO AIR ASSAULT 1-503 IN BN(-) TO SEIZE OBJ BULL IN SUPPORT OF 2D BDE RIVER CROSSING; BE PREPARED TO AIR ASSAULT 1-503 IN BN(-) TO SEIZE THE YOJU BRIDGE. ON ORDER, 2-2 AVN (AHB) AIR ASSAULTS 1-506 IN BN(-) TO SEIZE OBJS MANTIS OR TOKI IN SUPPORT OF 5(ROK)AR BDE RIVER CROSSING; BE PREPARED TO AIR ASSAULT 1-506 IN BN(-) TO SEIZE THE IPO BRIDGE; ON ORDER, AVN BDE CONDUCTS LINKUP OF 1-506 IN BN(-) WITH 5(ROK)AR BDE AND RELEASES 1-506 IN BN(-) OPCON TO 5(ROK)AR BDE. ON ORDER, 1-2 AVN (ATKHB) CONDUCTS HASTY ATTACKS IN SUPPORT OF 2D BDE'S ATTACK ALONG AXIS RED TO ATTRIT THE 30(ROK)ID(M), AND TO SEIZE KEY TERRAIN ALONG PL TONGIL. ON ORDER, CAF (US) AVN (ATKHB) CONDUCTS HASTY ATTACKS IN SUPPORT OF 5(ROK)AR BDE'S ATTACK ALONG AXIS BLUE TO ATTRIT THE 30(ROK)ID(M), AND TO SEIZE KEY TERRAIN ALONG PL TONGIL.

SECURITY OPERATIONS: AVIATION BRIGADE SCREENS THE DIVISION RIGHT FLANK TO PROTECT THE DIVISION'S ATTACK IN ZONE. ON ORDER, 109(ROK) AVN (ATKHB) AND SCT PLT/1-506 IN SCREENS NORTH ALONG THE DIVISION'S RIGHT FLANK, FROM PL PAT TO PL SONGYANG. ON ORDER, 109(ROK) AVN (ATKHB) SCREENS WEST ALONG THE DIVISION'S RIGHT FLANK FROM CS663343 TO CS655096. ON ORDER, SCT PLT/1-506 IN BN EXTENDS SCREEN FROM CS663343 TO CS784514. TARP/C/2-2 AVN (AHB) BE PREPARED TO CONTINUE THE SCREEN DURING THE HOURS OF DARKNESS FROM CS680480 TO CS664030.

REAR OPERATIONS: AVIATION BRIGADE CONDUCTS DIVISION REAR AREA OPERATIONS TO PROTECT FORCES IN THE DIVISION TAA AND LOCs IN THE DIVISION AREA. ON ORDER, 1-503 IN BN(-) AND 1-506 IN BN(-) CONDUCT PLATOON SIZE COUNTER-RECONNAISSANCE PATROLS AGAINST LEVEL II+ THREAT IN THE DIVISION TAA/REAR AREA. ON ORDER, 1-506 IN BN(-) IS TCF TO DEFEAT A LEVEL II+/III THREAT IN THE DIVISION REAR AREA. ON ORDER, 2-2 AVN (AHB) AASLTs 1-503 IN BN(-) AND 1-506 IN BN(-) TO CONDUCT COUNTER- RECONNAISSANCE PATROLS AND DEFEAT A LEVEL II+/III REAR AREA THREAT. 1-2 AVN (ATKHB) BE PREPARED TO CONDUCT HASTY ATTACKS TO DESTROY LEVEL III REAR AREA THREAT.

RESERVE OPERATIONS: AVIATION BRIGADE IS THE DIVISION RESERVE. ON ORDER, 1-503 IN BN(-) IS OPCON TO AVIATION BRIGADE UNTIL COMMITTED; PRIORITY OF PLANNING FOR AIR ASSAULT OPERATIONS IN SUPPORT OF 2D BDE. ON ORDER, A/1-72 AR IS OPCON TO THE AVIATION BRIGADE; OCCUPIES BP COUGAR TO BLOCK ENEMY COUNTERATTACK INTO THE DIVISION REAR AREA.

Figure 4. Aviation brigade concept for offensive operations

(TACAIR)), although planned in detail, were not as successful—1-2 Aviation Attack Helicopter Battalion (ATKHB) (C-Nite) was turned back 2 consecutive nights because of weather.

However, well-coordinated attack helicopter operations and execution of multiple joint air attack teams (JAATs) during the close battle in support of 2 (U.S.) Brigade and 5 (ROK) Armor Brigade, ensured their freedom of movement and ability to maintain the momentum of attack. 1-506 Infantry air assaulted deep into 5 (ROK) Armor Brigade sector to sever key lines of communication and await linkup with 5 (ROK) Armor Brigade.

Until linkup with 5 (ROK) Armor Brigade was completed, the Aviation Brigade remained the command and control (C^2) headquarters. This C^2 relationship placed a great demand on Aviation Brigade communications capabilities and coordination for fire support—another challenge met but not without difficulty.

The day/night screen of the division's flank was a real success story. The scout platoon and TOW sections from 1-506 Infantry, with attack helicopter battalions and the target acquisition and reconnaissance platoon (TARP), provided excellent intelligence to the division as well as protecting the division's flank during movement.

Finally, 1-506 Infantry's role in rear battle operations, executed in the form of counter-reconnaissance patrols and tactical combat force (TCF), defeated and disrupted Special Operations Forces (SOF) activities in the division rear area (DRA) during the offensive phase.

Second Phase—The Defense

In the second phase of Team Spirit '93, II (ROK) Corps transitioned to the defense (figure 5). The 2 (U.S.) ID's mission as the II (ROK) Corps reserve was conducted in two operational phases: Phase I—corps screen, and Phase II—counterattack, to defeat the I (U.S.) Corps main effort.

During the screen, 2 (U.S.) ID focused all aviation and intelligence assets towards identifying the I (U.S.) Corps main effort. Once identified, 2 (U.S.) ID then counterattacked to destroy the enemy's main effort. The Aviation Brigade was task-organized (figure 6) again to execute missions throughout the battlefield.

Concept of Operation

The concept of operation, outlined in figure 7, focused the Aviation Brigade on conducting both division and corps missions.

The defensive phase began with a 24-hour day/night aerial screen. The Aviation Brigade identified the I (U.S.) Corps main attack and attrited forces of the 30 (ROK) Mechanized Division through day hasty attacks, night deep attacks, and MLRS fires.

This allowed the 2 (U.S.) ID commanding general to select the appropriate CONPLAN—"SANDY" (figure 8)—to counterattack against the 30 (ROK) Mechanized Division.

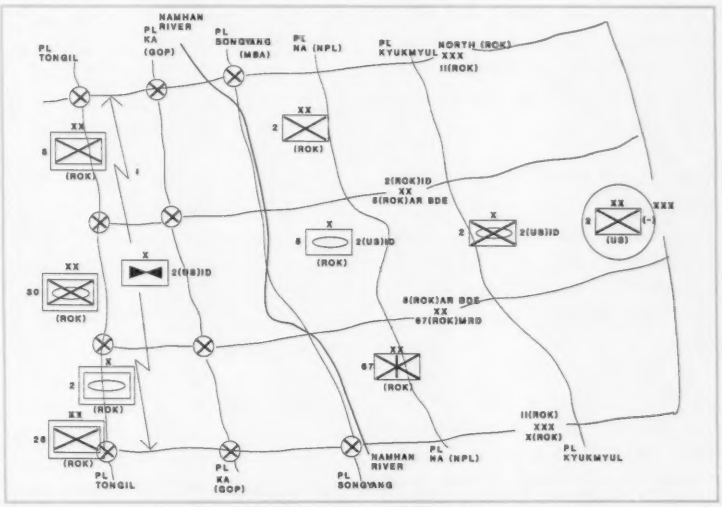


Figure 5. Operational laydown for defensive phase

Through continuous armed reconnaissance and hasty attack operations, coupled with MLRS fires, the Aviation Brigade also located and severely attrit the 2 (ROK) Armor Brigade as it attacked the II (ROK) Corps from the south.

The identification and destruction of 2 (ROK) Armor Brigade by the Aviation Brigade allowed 2 (U.S.) ID to focus ground maneuver elements primarily against the 30 (ROK) Mechanized Division in the north.

The close battle against 30 (ROK) Mechanized Division stressed the need for short air assault planning cycles and timely execution of air assaults to keep pace with the TEMPO of the battle.

The 1-503 Infantry and 1-506 Infantry were air assaulted to secure key choke points to block the enemy's advance, while attack helicopters provided security for the air assaults and conducted flank hasty attacks to destroy advancing forces.

In close operations with the ground maneuver brigades, the Aviation Brigade employed attack helicopters coupled with MLRS and cannon artillery fires. In the DRA, enemy air assaults by the 3 Battalion, 75th Ranger Regiment, demonstrated our vulnerabilities.

Although all divisional units had moved two or three times over the previous 8 days of the exercise, the rangers raided all brigade headquarters, the DMAIN, and the Aviation Brigade tactical assembly areas (TAAs).

The rangers were successful in air assaulting and inflicting some casualties and minor damage against their targets but every enemy aircraft (CH-47 Chinooks and UH-60s) with personnel aboard were destroyed during the extraction.

The OH-58D Kiowa Warriors and attack helicopters responded within 12

minutes of alert and combined artillery fires with hasty attacks to target and destroy these forces.

Operation Successes and Other Results

The operational successes of the Aviation Brigade, including cavalry squadron operations, provided the division increased leverage and battlefield lethality.

However, Team Spirit '93 will be long remembered not only for the warfighting results, but also for accomplishing a first in the Aviation Brigade—deploying the entire aviation intermediate maintenance (AVIM) company and aviation unit maintenance (AVUM) companies to form a brigade support area (BSA) in the Team Spirit maneuver area.

Dedicated maintenance from a forward field location rather than from home station significantly increased the brigade's readiness posture for continuous 24-hour operations throughout the exercise.

Lessons Learned

A key part of every exercise, whether successful or not, is the lessons learned. The Aviation Brigade not only learned new lessons but reinforced the old. The key lessons learned are highlighted below.

The first lesson learned is that of armed reconnaissance and screen missions for attack helicopter battalions. Traditionally, these mission have been a cavalry mission; attack battalions engaged lucrative, massed enemy mechanized/armor formations.

With the nature of future conflicts and the need for real-time intelligence, these missions should become more traditional for attack helicopter battalions. This is especially true in Korea, where aviation provides a key source of battlefield intelligence.

Attack helicopter battalions should look hard at incorporating these tasks into their unit mission essential task list (METL); we will in Korea.

An old lesson learned but validated is the importance of detailed parallel planning, synchronization of battlefield operating systems, and the conduct of rehearsals by all headquarters and unit. Although branches evolved to plans, dedicated early preparation paid great dividends in ensuring successful mission accomplishment on a fluid battlefield.

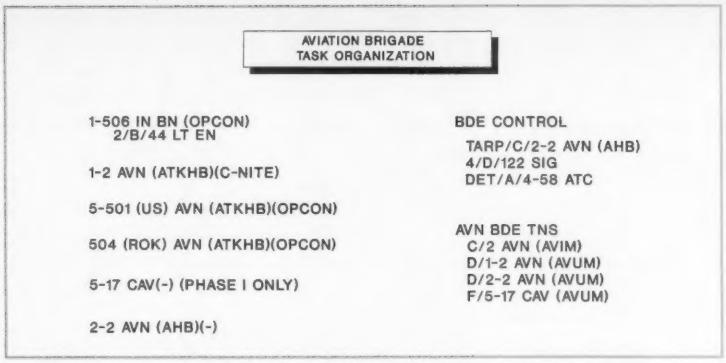


Figure 6. Aviation brigade task organization for defensive phase

Another old lesson learned is that we have to provide a quicker and more reliable method for aviation units to receive fire support. MLRS priority of fires for SEAD and in response to calls for fire were given to the Aviation Brigade.

In fact, 50 to 60 percent of all MLRS fires were from the Aviation Brigade. Yet, where pre-planned SEAD fires worked extremely well, calls for fire were too slow. Extended communications with retrans for OH-58D digital fires and for units' voice calls for fire were not always effective.

Backup calls for fire over the command net accomplished the mission, but not as timely as needed to synchronize all firepower. This system was even more difficult with cannon artillery support, which we received from ROK units.

The extended distances over which aviation operates necessitates a better architecture for fire support. Another old lesson learned is command, control, and communications (C^3) for an Aviation Brigade over the width and depth of the division and corps battlefield.

Aviation Brigade modification tables of organization and equipment (MTOEs) lack the manning and equipping for 24-hour C^3. The Aviation Brigade MTOE equips but barely mans a Main CP. Once the ground tactical air coordinator (TAC)—in our case two converted M997 ambulance high mobility multipurpose wheeled vehicles (HMMWVs)—is employed, effective 24-hour manning of the Main and TAC check points (CPs) for deep, close, rear, security, and reserve operations is difficult at best. On employment of the aerial TAC under more fluid situations, it is even more difficult.

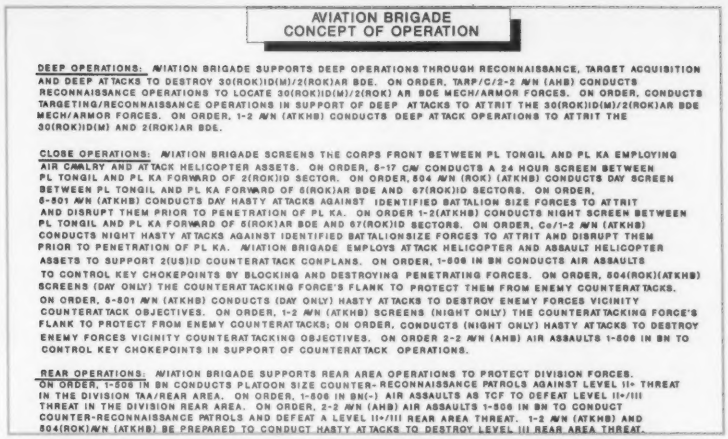
Furthermore, the aerial TAC of a UH-60 with an AN/ASC-15B console lacks adequate C3 radios. With only one single channel ground and air radio system (SINCGARS) radio, which is placed on brigade command, none are available for division command or fire support.

This requires the commander's or S3's vehicle to move to that TAC site, when possible, to provide effective C^3 or the Brigade Main CP has to receive/pass all division information to the TAC and coordinate fire support. Thus, eavesdropping on key nets is totally absent.

We must improve our Aviation Brigade MTOEs in both manning and equipping as well as upgrade the AN/ASC-15B console to a minimum of two SINCGARS radios.

A final lesson learned peculiar to Korea is the mission tasking (doctrinal employment) of CAF units with Army, Corps, and Division units; the tactical training of ROK CAF attack battalions; and C^3 for CAF units. CAF assets are allocated to units only on a mission basis for a defined period of time.

This allocation is routinely made about 12 hours before time of



AVIATION BRIGADE
CONCEPT OF OPERATION

DEEP OPERATIONS: AVIATION BRIGADE SUPPORTS DEEP OPERATIONS THROUGH RECONNAISSANCE, TARGET ACQUISITION AND DEEP ATTACKS TO DESTROY 30(ROK)ID(M)/2(ROK)AR BDE. ON ORDER, TARP/C/2-2 AVN (AHB) CONDUCTS RECONNAISSANCE OPERATIONS TO LOCATE 30(ROK)ID(M)/2(ROK) AR BDE MECH/ARMOR FORCES. ON ORDER, CONDUCTS TARGETING/RECONNAISSANCE OPERATIONS IN SUPPORT OF DEEP ATTACKS TO ATTRIT THE 30(ROK)ID(M)/2(ROK)AR BDE MECH/ARMOR FORCES. ON ORDER, 1-2 AVN (ATKHB) CONDUCTS DEEP ATTACK OPERATIONS TO ATTRIT THE 30(ROK)ID(M) AND 2(ROK)AR BDE.

CLOSE OPERATIONS: AVIATION BRIGADE SCREENS THE CORPS FRONT BETWEEN PL TONGIL AND PL KA EMPLOYING AIR CAVALRY AND ATTACK HELICOPTER ASSETS. ON ORDER, 6-17 CAV CONDUCTS A 24 HOUR SCREEN BETWEEN PL TONGIL AND PL KA FORWARD OF 2(ROK)ID SECTOR. ON ORDER, 504 AVN (ROK) (ATKHB) CONDUCTS DAY SCREEN BETWEEN PL TONGIL AND PL KA FORWARD OF 6(ROK)AR BDE AND 67(ROK)ID SECTORS. ON ORDER, 6-501 AVN (ATKHB) CONDUCTS DAY HASTY ATTACKS AGAINST IDENTIFIED BATTALION SIZE FORCES TO ATTRIT AND DISRUPT THEM PRIOR TO PENETRATION OF PL KA. ON ORDER 1-2(ATKHB) CONDUCTS NIGHT SCREEN BETWEEN PL TONGIL AND PL KA FORWARD OF 6(ROK)AR BDE AND 67(ROK)ID SECTORS. ON ORDER, Co/1-2 AVN (ATKHB) CONDUCTS NIGHT HASTY ATTACKS AGAINST IDENTIFIED BATTALION SIZE FORCES TO ATTRIT AND DISRUPT THEM PRIOR TO PENETRATION OF PL KA. AVIATION BRIGADE EMPLOYS ATTACK HELICOPTER AND ASSAULT HELICOPTER ASSETS TO SUPPORT 2(US)ID COUNTERATTACK CONPLANS. ON ORDER, 1-506 IN BN CONDUCTS AIR ASSAULTS TO CONTROL KEY CHOKEPOINTS BY BLOCKING AND DESTROYING PENETRATING FORCES. ON ORDER, 504(ROK)(ATKHB) SCREENS (DAY ONLY) THE COUNTERATTACKING FORCE'S FLANK TO PROTECT THEM FROM ENEMY COUNTERATTACKS. ON ORDER, 6-501 AVN (ATKHB) CONDUCTS (DAY ONLY) HASTY ATTACKS TO DESTROY ENEMY FORCES VICINITY COUNTERATTACK OBJECTIVES. ON ORDER, 1-2 AVN (ATKHB) SCREENS (NIGHT ONLY) THE COUNTERATTACKING FORCE'S FLANK TO PROTECT FROM ENEMY COUNTERATTACKS; ON ORDER, CONDUCTS (NIGHT ONLY) HASTY ATTACKS TO DESTROY ENEMY FORCES VICINITY COUNTERATTACKING OBJECTIVES. ON ORDER 2-2 AVN (AHB) AIR ASSAULTS 1-506 IN BN TO CONTROL KEY CHOKEPOINTS IN SUPPORT OF COUNTERATTACK OPERATIONS.

REAR OPERATIONS: AVIATION BRIGADE SUPPORTS REAR AREA OPERATIONS TO PROTECT DIVISION FORCES. ON ORDER, 1-506 IN BN CONDUCTS PLATOON SIZE COUNTER-RECONNAISSANCE PATROLS AGAINST LEVEL II+ THREAT IN THE DIVISION TAA/REAR AREA. ON ORDER, 1-506 IN BN(-) AIR ASSAULTS AS TCF TO DEFEAT LEVEL II+/III THREAT IN THE DIVISION REAR AREA. ON ORDER, 2-2 AVN (AHB) AIR ASSAULTS 1-506 IN BN TO CONDUCT COUNTER-RECONNAISSANCE PATROLS AND DEFEAT A LEVEL II+/III REAR AREA THREAT. 1-2 AVN (ATKHB) AND 504(ROK)AVN (ATKHB) BE PREPARED TO CONDUCT HASTY ATTACKS TO DESTROY LEVEL III REAR AREA THREAT.

Figure 7. Aviation brigade concept of operation for defensive phase

employment. During Team Spirit '93 the Aviation Brigade required three contingency plans for both the offense and defense based on anticipated OPCON units: task organization with organic units only, with required CAF assets, and with partially requested CAF assets.

This was further complicated by the allocation of assets based on the requirement for a day or night fighting capable attack helicopter battalion.

This flawed method of late allocation on a mission basis resulted in all Aviation Brigade detailed planning and rehearsals being conducted with organic aviation units only.

The OPCON CAF units arrived in time for coordination briefings only, followed by employment. This type of force allocation must change.

Once the Aviation Brigade and division derives relative combat power and defines a requirement for additional aviation (CAF) assets, these assets should be allocated by phase of operation, not by time and type of mission.

The battle rarely unfolds identical to a timetable or synchronization matrix. Much like a pre-planned JAAT seldom occurs, a pre-planned time for CAF employment by mission and time is unrealistic.

A second concern is the difference in tactical training of U.S and ROK attack helicopter battalions. In executing the armed reconnaissance and screen missions for U.S. attack helicopter battalions, 2 (U.S.) ID and U.S. CAF attack helicopter battalions responded well.

However, as expected, the ROK attack helicopter battalions were unfamiliar with these missions and had limited ability to perform them. U.S. Army, Europe (EUSA) Aviation and the U.S. Army Training and Doctrine Command (TRADOC) liaison officer, along with U.S. aviation commanders, must play an active role in increasing ROK capabilities in these areas.

Finally, communications between ROK and U.S. forces must be improved. U.S. secure frequency modulation (FM) radios are incompatible with ROK FM radios. This necessitates a single channel RED FM brigade command net to communicate with ROK units.

With insufficient radios in aircraft for C^3, U.S. commanders cannot eavesdrop on this RED FM net; and, obviously, ROK units cannot monitor U.S. nets. This greatly increases the workload for keeping all units abreast of the current battlefield situation.

Our TRADOC and U.S. Army Materiel Command (AMC) communities need to work with the ROK military to improve standardization in communications.

Although only highlighting our lessons learned in Team Spirit '93, these, and the many not addressed, provide a good framework for the Aviation Brigade to train and prepare for any future conflict. This alone has made Team Spirit '93 a large success.

Conclusion

This article has informed you how one brigade—the Aviation Brigade, 2 (U.S.) ID—operates as member of a division combined arms team. Needless to say, the accomplishments of the Aviation Brigade on Team Spirit '93 are a great source of pride.

Yet this pride is not just for the division and units involved but for the aviation community as a whole. One again, aviation has shown the lethal warfighting capability it can deliver to the battlefield.

Now with the lessons learned, the Aviation Brigade, 2 (U.S.) ID, can increase Army Aviation's contribution to the battle and increase U.S./ROK readiness in preserving peace and freedom in the Land of the Morning Calm.

'WINGS OF THE WARRIORS!'

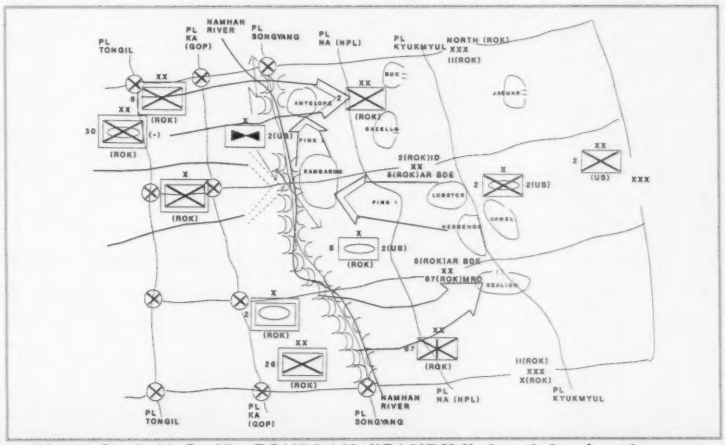


Figure 8. 2 U.S. ID CONPLAN "SANDY" for defensive phase

Night JAAT in Korea: 'C-NITE' Cobra and the F-16C 'LANTIRN'

Captain Barry A. Midkiff, Commander, B Company
CW4 Jack B. Lawton, Standardization Officer
CW4 Randall J. McGuire, Assistant S-3
4th Battalion, 501st Aviation Regiment
Republic of Korea

Scenario

Spring, 0200 hours, somewhere in the heart of the Korean peninsula. Diplomatic relations between the North and South have completely broken down. The demilitarized zone has been violated in force by the North Korean People's 3d Army.

A swift, violent response to this unprovoked aggression has been mounted by U.S. and Republic of Korea (ROK) Forces. North Korean Army Colonel (COL) Rho, Tae Un stands in the open hatch of his command tank and smiles. The lessons his 42d Tank Regiment has learned over the past few days have not been without cost. U.S. and ROK Air Forces have had overwhelming air superiority. The accuracy of close air support (CAS) has destroyed entire battalions in a single engagement. This, together with the many smaller battles with attack helicopters, has stalled COL Rho's push toward Seoul. The American pilots have thwarted every penetration the 3d Army has made in the first 72 hours of battle. Tonight, however, would be different.

"Tonight we'll crush the enemy and push forward under the cloak of darkness to secure the objective," COL Rho has told his battalion commanders and staff.

The reports from the head of the formation are good—very good. The M48 tanks of the ROK Army armored battalion were no match for COL Rho's specially trained night fighters. Suddenly, a brilliant explosion turns night into day. One of COL Rho's self-propelled antiaircraft artillery guns has exploded in flames. The regimental executive officer's armored personnel carrier is also engulfed in fire and secondary explosions. He has seen this before—the American attack helicopters—but how? Then comes the terrifying sound of jets screaming low overhead. Ten of his tanks are dead or crippled with one pass. Chaos and panic freeze the attack as COL Rho watches his plan crumble right before his eyes.

This scenario may seem like something out of a Tom Clancy novel. It isn't! It is one of the many simulated battles that took place during Team Spirit '93. What scenario is this? It's the Night Joint Air Attack Team (NJAAT). The NJAAT was validated by AH–1F C–NITE Cobras of the 4th Battalion, 501st Aviation Regiment, 17th Aviation Brigade, and the F–16C low altitude navigation target infrared night (LANTIRN) aircraft of the 36th Fighter Squadron.

Three times during Team Spirit '93, the gunfighters of the 4th Battalion, with the 36th Fighter Squadron from Osan Airbase, Korea, executed a coordinated attack on a simulated enemy force at night. The first mission was a company–sized, deliberate attack on a tactical assembly area. During this operation, B Company "Paladins" took part in the first NJAAT conducted in the ROK, using the LANTIRN system.

Planning for this mission, as in any night attack, was thorough and complete, but as always, weather and enemy actions soon changed the target area. The battalion planning cell, including the combat veteran enlisted terminal air controllers (ETACs) of the 5th Air Control Group, responded to the changes quickly and did not allow the obstacles to delay or degrade the mission.

Initially, it was not known if the LANTIRN system would be sensitive

enough to identify friendlies and allow the F–16s and Cobras to simultaneously engage the target. The problem of positive identification became a major concern to all involved, besides the deconfliction of airspace—at night, in low illumination, and in the rugged mountains of South Korea. Here, unlike the deserts of Southwest Asia, the altitude above ground for an aircraft changes rapidly. Battle positions for the Cobras may be at 2,000 or 3,000 feet above sea level.

With the mission brief completed, the Paladins launched and were soon set in their battle positions according to the battalion standing operating procedure. The C–NITE telescopic sight units (TSUs) soon were acquiring targets; however, the order to fire was held to preclude fratricide and ensure all segments of the operation were fully coordinated. As the fighters checked in with the ETACs at the initial point (IP), they reported they had identified the friendly helicopters and the target area. This call synchronized all the elements and cleared the air battle captain (ABC) to give the order to engage. The ABC also made radio contact with the fighter lead and confirmed the position of B Company and the disposition of the target. The Cobras unmasked and completed their first engagement using TOWs and 2.75–inch multipurpose submunition rockets to suppress all known and suspected air defense systems. When fighter lead called, "Thunder," 10 seconds out from the target, the Cobras remasked. The F–16s, simulating the attack with CBU–57 cluster bomb munitions, swept through the target and returned to the IP.

Later re–engagements were made by the attack helicopters after the fighters called clear of the targets. As the fighters completed their fourth pass, ammunition management and fire distribution became critical to the Cobras. After the last engagement, the ABC requested a preplanned artillery strike to cover the withdrawal of B Company. The Paladins made their way back to the brigade forward arming and refueling point and returned to the battalion assembly area.

Twice more, during Team Spirit, the 4th Battalion gunfighters completed night missions with the F–16s. The final mission validated the experience of the two previous missions and involved the most complex planning of all attack helicopter missions—the cross-flot deep attack. This operation was a true combined, joint, multiechelon operation involving Army Aviation, ROK Army field artillery, and U.S. Air Force (USAF) CAS. This mission disrupted the forward progress of the enemy's counterattack forces and allowed the friendly ground forces to consolidate and continue to offensive without delay.

Many in Army Aviation have expressed a "loss of faith" in JAAT as a viable option for today's combined arms operations. The arguments are strong, but the concept of combined fires on a target involving Army Aviation, Field Artillery, and USAF CAS continues to be one of the most flexible and lethal tools of the ground commander on the modern battlefield.

Many in Army Aviation have expressed a "loss of faith" in JAAT as a viable option for today's combined arms operations; however, the whole concept of JAAT is changing.

This concept is further amplified by the NJAAT. The attack helicopter is certainly a lethal weapon by itself, as is field and rocket artillery. However, the combined fire of these two highly effective weapon systems, plus the F–16 LANTIRN, can be absolutely overwhelming to even a well–trained and motivated enemy. The whole concept of JAAT is evolving and changing, not dying.

There are limitations to consider in maximizing the effectiveness of all three systems when employed simultaneously at night. Attack helicopters must have targets pinpointed or a targeting mechanism available to acquire individual targets. The AH–64 Apache and OH–58D Kiowa Warrior both have this capability. However, the AH–1F C–NITE must use other means of target identification because of the limited range of the C–NITE TSUs. OH-58D and special operations on–site personnel can be used to hand–off targets to AH–1Fs. Artillery should be used deliberately and sparingly. The bright explosions shut down night vision goggles. The fires and hot debris caused by the exploding rounds and secondary explosions create problems with target acquisition for the C–NITE gunners. If the artillery is to continuously engage, it must be preplanned and shifted boldly from the target area to cut off reinforcements or limit escape. Keeping these restrictions in mind, artillery still remains a viable partner in this combined arms operation. Finally, the F-16C LANTIRN must be terminally guided in the target area by an experienced ETAC or helicopter forward air controller who is on station with the attack helicopter unit in contact.

The NJAAT is a credible and dynamic option for commanders. The 4th Battalion, 501st Aviation Regiment gunfighters have proven the concept and added substance to the meaning of JAAT. We stand ready to execute this mission to support the Combined Forces Command in Korea. **STRIKE DEEP!**

Above: Korean soldiers enter an American helicopter in a pickup zone.
Right: The American helicopter approaches a Korean pickup zone.

So You're Headed For Korea

Lieutenant Colonel John R. Martin
Commander
1st Battalion, 501st Aviation
Republic of Korea

So you just received orders to Korea, huh? I imagine you're looking forward to the chance to visit another part of the world, to meet some Koreans and to experience their culture.

Have you thought anything yet about working with the Republic of Korea Army (ROKA) in a combined environment?

Well, I'm sure excited about going to Korea, but I haven't thought much about combined operations.

I imagine it's pretty tough, though. What kinds of things can go wrong in a combined air assault operation? What are the tricks you need to know to solve these problems?

There are lots of things that can go wrong in combined operations in the Republic of Korea (ROK):

- On operations with night vision goggles (NVG), there infrequently are soldiers in the pickup zone (PZ) who want to take pictures. You can imagine

The tour of duty is challenging! So are the language barriers, cultural changes, and operational techniques.

the effect of a flashbulb or two as your try to lead the flight to an on-time touchdown. Just about as often, a vehicle in or near the PZ will turn on its lights in an effort to "help" you. The effect may be only temporary, but the potential for disaster is high.

- Soldiers in the landing zone (LZ), trying to open the UH-60 Black Hawk cargo door, pull the emergency exit handle instead. Precious seconds are lost as the crewchief scrambles to get everything back in place.

- Soldiers unfamiliar with the four-point UH-60 harness take too long to buckle their seat belts. Again, more time is lost and the precise time schedule planned goes down the drain.

- Ground commanders plan routes that are too short or too long and select PZs and LZs that are too small or too dusty or contain too many obstacles. The ground commander's tactical plan can't be accomplished with the assets available.

Wait a minute!

Those problems aren't unique to combined operations. They're the same challenges I've seen at Fort Campbell (or Fort Hood or Fort Bragg), working with American units!

You're getting smarter by the minute!

To tell the truth, there are few really unique difficulties associated with combined air assault operations.

And there aren't really any "tricks," or any need for them, to producing successful combined air assault operations.

You do need to understand that ROKA units are not quite as well-versed as American units are in air assault operations.

The Korean Army is, in many ways, an infantry Army. They have many infantry units, but very few aviation lift units. Divisions don't even have organic aviation assets. Thus, ground units have very limited opportunities to execute air assaults.

The positive side to this is that the Koreans put a great deal of emphasis on taking full advantage of the few air assault opportunities they do have.

For U.S. forces, that means you have to emphasize the basics. That's what brings the results that put Korean soldiers into an LZ, on time and on target, every time. These are the same basics that produce similar results with American soldiers.

That's easy to say, but I know not being able to speak the same language must make these operations nearly impossible.... How do you overcome this barrier?

Again, there's no "trick," but you're right: communication is tough. It's also the key to success.

Few American soldiers have even a rudimentary ability to speak Hangul, the Korean language. It's not like a tour is Europe, since many of us speak German or French.

And for years, battalion commanders headed for command in Europe have been sent

Korean soldiers continue to buckle their seat belts before take off.

to language school to help them work with our allies there.

None of the officers sent to Korea receive the same instruction, which could make a big difference in Korean-American communications. The air assault planners, whether the Battalion S-3 or the Company Operations Officer, must plan to overcome the language barrier.

In Korea, Korean Augmentees to the U.S. Army (KATUSA) are serving in every unit. These ROKA soldiers, assigned as anintegral part of American units since MacArthur's days, provide many valuable services, but one of the most important is translation. Taking one or two of these soldiers with you is vital when you are going to meet with your Korean Army counterparts.

Most American units also have one or two Korean-Americans serving in the US Army who also perform this valuable translation function. Also of enormous assistance is the fact that most Korean officers, and many of the enlisted soldiers, have studied English for years.

Use of KATUSAs, Korean-American soldiers and Korean Army soldiers is essential from planning-to-execution if your combined air assault is to be successful.

The planning phase is the most important. Koreans, like Americans, sometimes select untenable LZs and PZs and routes that don't make sense for protection of the forces while they are in the air.

But you can't go to the initial meeting and completely dismiss the planning they have done. Their planning is a clear indication of the ground commander's intent.

Support of that intent, within the capabilities of your aviation unit, is your job. Picking an "ideal" PZ or LZ that is too far from the objective doesn't support the ground commander.

Very few ground commanders are absolutely insistent upon use of their plan to use your aviation unit.

If you point-out a better way, because of safety, the threat or other operational concerns to accomplish their mission, they are usually flexible enough to accommodate that.

They are smart enough to realize the advantages aviation can provide in accomplishment of their missions.

So far you've only discussed the ground units. Don't you also fly with ROKA Aviation units?

You're right; the ground units aren't the only combined part of these operations. Aviation units from the ROKA Aviation Command also participate. As a matter of fact, they're frequently in charge of the operation and you simply provide support. Formation of combined task forces is the norm.

Because of that, planning has to include a realistic assessment of all units' capabilities. A Korean unit using UH-1H Huey

American aircraft wait for Korean troops in a pickup zone.

helicopters can't go as fast as the U.S. unit with UH-60s. Koreans using AN/PVS-5 NVG can't see as well on the really dark nights as the Americans can with ANVIS-6 NVG.

The Koreans are rapidly making UH-60 units operational and are training with ANVIS-6, so these limitations are starting to disappear, but they will remain with us for the foreseeable future.

The split-second timing required for some operations can't be achieved by ground and/or aviation units working together only infrequently or for the first time. Good plans and rehearsals are essential.

Plans must be developed that reduce the need for such precision and provide flexibility if schedule requirements aren't met. If the planning is good, the execution will be, too.

There may be radio and communications security differences, but use of simple code words or strict control measures can eliminate all but the most complex command and control problems.

Rehearsals should be a part of every combined operation. A rehearsal can be as simple as having each flight lead provide a brief-back to the air mission commander, using a map with the air assault graphics superimposed. Even better is a "sand box" with good depictions of the terrain.

Having flight leads simulate their actions while walking around a sand box has more than once shown a problem with synchronization. That problem could be solved then rather than being a "show-stopper" during the execution phase.

Another "rehearsal" is done before every peacetime operation and will be done in combat—if time permits. This is a practice loading and unloading of each type helicopter involved in the air assault.

Ideally, it should be done as close as possible to the actual event, but a day prior may be acceptable. It must be done in full combat gear, just as for the air assault.

It's okay to teach the soldiers how to buckle their seat belts while they're wearing soft caps, but they need to practice loading with full gear. It's a lot harder getting into a helicopter when you're carrying a machinegun and wearing a pack.

Air assault planners need to know how long it will really take so they can allot adequate time in the PZ. This training session and rehearsal is also an ideal time to teach the soldiers about the emergency exits.

Some mistakes may happen anyway, but this process helps to minimize them. Information cards or packets given to ground troops by the pathfinders can also reduce confusion in the PZ.

Just the basics. Concentrate on communications. Good plans. Rehearsals are mandatory. I think I've got it. This is going to be easy!

Well, you're starting to get the idea. It's professionally challenging and rewarding, but it's still not going to be easy.

A British officer once commented that the Americans and British are "two peoples separated by a common language."

If there is such a separation between these nations, you can imagine that the gulf must be even larger between Americans and Koreans, separated by vastly different languages and cultures.

However, the Korean Army soldiers are every bit as professional as our American soldiers are. Emphasis on the basics of air assault operations ensures that combined operations for both of these fine Armies will be a success every time.

Medium-Lift Helicopters In Combined Operations

Lieutenant Colonel Thomas J. Rini
Commander
2d Battalion, 501st Aviation Regiment
Camp Humphreys, Korea

The 2d Battalion, 501st Aviation Regiment, stationed at Camp Humphreys, Korea, has provided medium-lift helicopter support to U.S. and Republic of Korea (ROK) forces for the past 22 years—and stands ready to extend its support into the next century.

The battalion was first activated in March 1971 as the Aviation Battalion, Army Korea Support Command, Taegu. On 1 July 1973, the battalion relocated to Camp Humphreys and was redesignated the 19th Aviation Battalion. On 16 October 1988, the battalion received its regimental designation.

The battalion consists of headquarters and headquarters company, and two CH-47D Chinook helicopter companies. These companies were formed from the 213th and 271st Aviation Companies and each has its own proud heritage.

The 213th Aviation Company was activated 1 June 1966 at Fort Benning, GA, and deployed to Vietnam in January 1967. The "Blackcats" logged over 54,000 combat hours from February 1967 to March 1972 before beginning their proud service in Korea.

The 271st Aviation Company was activated 25 April 1967 at Fort Benning and deployed to Vietnam in February 1968. The "Innkeepers" logged more than 42,000 combat hours from February 1968 through December 1971 before beginning their proud service in Korea.

The 2d Battalion currently has 32 CH-47D aircraft, but the battalion is no longer the only Chinook battalion in Korea.

Formed in 1988, the ROK 301st Aviation Battalion is also equipped with CH-47Ds. The ROK Chinooks have new airframes and operate at a 4,000-pound higher gross weight of 54,000 pounds.

Other enhancements include improved engines, an external hoist system, and weather radar capability. Additionally, the ROK Air Force employs Chinooks with twice the external fuel capacity in aerial rescue operations.

Both the 2d Battalion, 501st Aviation Battalion, and the 301st Aviation Battalion are key participants in the Combined Aviation Force. On a regular basis, both units are involved in air assault training, where ROK ground units work hand-in-hand with U.S. and ROK Aviation units to conduct large-scale air assault operations.

The 2d Battalion's higher headquarters, the 17th Aviation Brigade, supports this training with CH-47, UH-60 Black Hawk, AH-1 Cobra, and OH-58 Kiowa aircraft.

The 301st's higher headquarters, the ROK Army Aviation Command, supports the training with CH-47, UH-60, UH-1 Huey, AH-1, and 500 MD (formerly OH-6) aircraft.

The 2d Battalion, 501st Aviation Regiment, continues to provide highly trained soldiers and medium-lift helicopter support to U.S. and ROK forces.

This air assault training involves large numbers of aircraft and is conducted under challenging night vision goggle conditions in perhaps the most demanding and hostile flight environment in the world today.

The 2d Battalion, 501st Aviation, and the 301st Aviation Battalion are critical elements of projecting combat power to the Commander in Chief—his most versatile asset to logistically support each field army!

Both the 2d Battalion and the 301st Aviation Battalion stand ready with bright, highly trained soldiers and operationally ready Chinooks to provide this support whenever and wherever needed.

Attack Helicopter Operations in the Combined Environment

Captain Anthony S. Pelczynski
Company Commander
5th Battalion, 501st Aviation Regiment
Camp Eagle, Wonju, Korea

Captain Cho, Choon Ho
Company Operations Officer
105th Attack Helicopter Battalion
31st Aviation Group
Army Aviation Command, Republic of Korea

INTRODUCTION

Today, multinational forces quickly are becoming a normal way of conducting strategic, operational, and even tactical operations. Officers and soldiers must face the reality that they may someday be directed in battle by a commander from another country. Attack helicopters are an essential element of the combined arms team. With training, attack helicopters easily can be placed under the operational control of a commander from an allied nation. Learning about attack helicopter operations in a combined environment is important to all aviation leaders.

In Korea, interoperability between the Armed Forces of the Republic of Korea (ROK) and the U.S. Armed Forces is essential to successful military operations on the peninsula. Preparing our two great armies to fight side–by–side in the region of the world where the last vestige of the cold war still looms over the ROK is a continuing challenge.

The ROK Armed Forces are well trained and very capable. They have invested a great deal of time and money in high-tech weapons and force restructuring. This year, the ROK has assumed command of the Combined Forces Command, Korea, which includes all U.S. ground forces. The U.S. Government remains committed to being a part of the South Korean defense plan against a possible North Korean aggression well into the next century. Our two forces are strongly linked by a common cause and purpose.

To prepare for war, U.S. and ROK Forces conduct combined training at all levels. Major exercises, such as Team Spirit and Ulchi-Focus Lens, rehearse large–scale operations and tactical scenarios involving divisions and brigades. While other smaller exercises and ranges work the smaller units' capabilities. On a monthly basis, attack helicopter battalions in the ROK have the opportunity to train with ROK ground forces. Conducting attack helicopter training under the operational control of a ROK commander with ground troops presents some unique challenges.

DOCTRINE AND TACTICAL PROCEDURES

Our operational doctrine and tactical procedures are similar and compatible. The ROK has purchased most of its military hardware from the United States and, therefore, has adopted much of the doctrine and force structure to support the equipment.

As a result of our similarities, the ROK and U.S. Forces have developed a closely knit force that operates as one combined army. Still, there are some minor obstacles when combining U.S. attack helicopters in support of ROK ground forces. These obstacles can be overcome through effective training and good communications.

One obstacle is that ground commanders always do not understand how to successfully employ the attack helicopter assets assigned. This problem exists in both our armies. However,the ROK has had the AH–1 Cobra helicopter only since 1988. Many of its ground commanders have had limited training exposure to attack helicopter operations.

Also, during training, we send only a company–sized element to support a range. This is done to conserve our limited resources and maximize our training opportunities. Some commanders may view this as standard operating procedure.

This problem can be solved by conducting combined operations training as often as possible; and by teaching our capabilities and limitations at every opportunity available, whether it is during a coordination meeting or an officer professional development session. Effective communications between the ground commander and the attack helicopter commander will resolve many of the problems during the onset of war.

COMMUNICATIONS

Language remains the foremost barrier to effective communications during combined operation between ROK and U.S. Forces. An interpreter is needed to conduct joint coordination meetings. During coordination meetings, the U.S. liaison officer (LNO) is assisted by a Korean Augmentee to the U.S. Army (KATUSA).

These young enlisted soldiers are members of the Korean Army but work directly with the U.S. Army throughout their enlistment. They have a good command of the English language, but do not always possess the tactical acumen required to successfully translate the information being passed. At times, hand gestures and simple drawings are needed to communicate.

ROK planners usually will have detailed graphics of the operations plan, but these too require translation. Their graphic symbols are the same as ours;however, Hangul, the Korean language, is difficult to read unless one is fluent. The most important thing to remember is to try and understand fully the operation plan and the commander's intent by whatever means available.

The attack helicopter air battle captain (ABC) must conduct detailed planning and precise execution when supporting ROK units. He also must remain flexible enough to meet the challenges on the fluid battlefield. Understanding the commander's intent assists the ABC when the ground commander has to change the plan to meet the enemy. Communications between the ground commander and the ABC during a rapid mission change is difficult. One solution is to assign an LNO to the supported commander's operations center. The LNO, assisted by an interpreter, will be able to advise the ground commander on the best use of the attack helicopters as well as provide effective communications with the ABC. Another solution is to assign a ROK aviation officer to the attack battalion to serve as an LNO. The ROK LNO can assist during coordination meetings and handle all Korean language traffic over the radio during the missions.

Radio communications also can affect the operations. U.S. and ROK ultrahigh frequency (UHF) and very high frequency (VHF) bands are compatible. This provides excellent communications between the ABC and the supporting Air Forces during joint air attack team (JAAT) operations. However, the ground forces use only nonsecure, single channel frequency modulation (FM) radios. This is in contrast to the frequency hopping, secure single channel ground and air radio system (SINCGARS) FM radio system of the United States. The problems of nonsecure radio conversation can be minimized by detailed planning and the use of code words.

BUILDING CONFIDENCE BY COMBINED TRAINING

Each time we conduct a combined operation, both the U.S. and ROK participants benefit immensely from the experience and exposure to each other's operational procedures. Both sides remain flexible to changes. Attack helicopter ABCs must understand the Korean commander's intent to complete the mission according to the ground commander's course of action.

On the other hand, the ground commander must understand the attack helicopter's capabilities and limitations to effectively use the deadly power of the attack helicopter. As we do with our own ground forces, Army Aviation must sell itself and emphasize its abilities to become a decisive asset on the battlefield.

The opportunity to do this is during combined operations training. JAAT and air assault security missions involve close coordination between the U.S. and ROK Forces and give prime opportunity for both to learn and rehearse our wartime missions.

CONCLUSION

Combined operations between Korean and American Forces are an essential element of the defense plan for the ROK. As members of the Combined Aviation Force, the 5th Battalion, 501st Aviation Regiment (U.S.), and the 105th Attack Helicopter Battalion (ROK) have had the opportunity to conduct many joint and combined operations.

One important lesson to be learned is to remain flexible, but insistent when working with the ground commander to adhere to the doctrinal employment of his aviation forces. The lack of an habitual relationship with any one ROK unit has caused us to continuously face the same stumbling blocks during the coordination meetings and execution of the missions.

We have proven to ourselves and our Korean counterparts that U.S. and ROK Army attack helicopter units can and will continue to be a vital asset during any political conflict. Fighting side–by–side, in a combined effort we can maximize our combat power regardless of which country we support.

Alone, Unarmed, and Unmanned—UAVs in Korea

Major Marilee D. Wilson
Aviation Officer
501st MI Brigade
Republic of Korea

Lessons learned from Team Spirit '93 will make the fielding of UAV–Short Range far smoother for the U.S. Army and host nation allies.

Pioneer, the Army's unmanned aerial vehicle (UAV), deployed to Korea to support Team Spirit '93 exercises 7 through 18 March 1993. This annual U.S.–Korean exercise marked the first time an Army UAV system had been deployed to the Korean theater for other than demonstration purposes It also was the first overseas deployment for the Army's Pioneer since Operation Desert Storm.

With virtually no prior notice, Company C, 304th Military Intelligence (MI) Battalion, the Army's only UAV company, packed up their UAVs at the Joint Readiness Training Center (JRTC), Fort Chaffee, AK, and headed for the "Land of the Morning Calm."

CAPABILITIES

Pioneer can significantly enhance the commander's view of the battlefield through its capability to provide near–real–time reconnaissance, surveillance, target acquisition, and battle damage assessment. Driven by a pusher propeller, and powered by an aviation gasoline–fueled engine, Pioneer can reach out 185 kilometers (kms) from its ground control station (GCS). It carries a payload designed to obtain and relay high–quality video imagery, using either a daytime television camera or a forward–looking infrared (FLIR) system that can be used effectively both in day and night conditions (see chart).

Characteristics of the Pioneer	
Maximum Gross Weight	429 pounds
Wing Span	16.9 feet
Launch Methods	a. Rolling Takeoff–210 m meters b. Rocket-Assisted Takeoff
Recovery	Rolling Recovery with Arresting Gear
Endurance	6 hours
Maximum Range	185 kms
Maximum Altitude	15,000 MSL

TEAM SPIRIT OBJECTIVES

Team Spirit objectives for this deployment were—

- Integrate the UAV into Combined Forces Command (CFC) and U.S. Forces–Korea (USFK) operations as a corps–level intelligence and targeting asset.
- Identify operational issues and logistical support requirements, unique to the UAV, to anticipate the planned fielding of UAV–Short Range (UAV-SR) to Korea in the mid–1990s.

CONCEPT OF THE OPERATION

Pioneer was used in a direct support role for the Corps conducting the defense and in general support to other Team Spirit forces, as tasked through the command and control/joint staff intelligence collection process. The UAV company was placed under the operational control of the 3d MI Battalion (Aerial Exploitation) to facilitate the coordination of intelligence taskings and airspace usage.

MISSION EXECUTION

Team Spirit tasking consisted of point and route reconnaissance. Liaison officers from the supported corps (I Corps and 2d Republic of Korea Corps) observed near–real-time target imagery on a remote monitor in the UAV Operations Center established near the GCS. These liaison officers could evaluate the imagery presented and redirect the UAV in-flight over the maneuver area, if necessary. Pioneer successfully imaged Team Spirit targets over 75 kms from the GCS.

INTELLIGENCE REPORTING

Communications equipment organic to the aerial exploitation battalion was used to disseminate the intelligence collected by Pioneer. Products generated for the supported maneuver units included—

- In–flight spot reports transmitted over STUIII and the tactical commander's terminal.
- Post–mission message summaries (reconnaissance exploitation reports).
- Immediate hard copy images, printed in the GCS during the mission.
- Taped imagery of the entire mission, copied onto standard video cassette recorders.

LIMITATIONS

Despite its exceptional capabilities, Pioneer is, by design, strictly a fair-

weather system. Missions cannot be flown in icing conditions nor during significant rainfall. This proved to be a significant limitation during Team Spirit, given the inclement weather often encountered in Korea, particularly in late winter early morning hours. To deconflict UAV traffic from air missions previously scheduled over the Team Spirit '93 ground maneuver area (GMA), Pioneer was limited to flying between 0130 to 0600 hours daily. Combination of system design, mission schedule, and adverse winter weather significantly restricted our use of the UAV.

UAV CONTROL AND AIRSPACE MANAGEMENT

In coordination with the air component command and air traffic services (ATS), a combination of positive and procedural control measures were established to separate the UAV from other air traffic within and outside the GMA.

The UAV pilot maintained communications with ATS during the entire mission. Pioneer's launch from and recovery to the airfield runway was handled similar to normal instrument flight rules operations.

A discrete transponder beacon code was assigned to allow radar approach control to monitor the UAV position in flight. The Pioneer transponder lacked, however, Mode C capability for altitude reporting. Loss of the transponder signal during any phase of the mission would have required the UAV to return to base.

An air corridor was established between the launch/recovery airfield and the Team Spirit maneuver area. While this 1 nautical mile-wide corridor followed a strictly defined route, it was necessary to have maximum flexibility to maneuver over the exercise area to respond to the corps commander's intelligence requirements.

Once over the designated maneuver area, the UAV was allowed to fly as necessary between 2,000 and 6,000 feet mean sea level (MSL), although the mission was flown primarily at 6,000 feet. Mission altitude was dictated by considerations for video image quality and the absolute requirement to maintain line-of-sight data link between the UAV and the GCS. Rotary– and fixed–wing traffic continued operations both above and below the UAV restricted operations zone.

SAFETY

Elaborate technical safeguards are built into the Pioneer system and local procedures were put in place during Team Spirit to safely recover the UAV in case of an emergency like a lost data link or an aerial vehicle malfunction.

Hunter , the next generation UAV–SR

THE PAYOFF

Although proven in Operation Desert Storm and successfully flown at the JRTC and the National Training Center, the UAV is still a relatively new addition to the aviation community and our MI architecture. The exposure to Pioneer during Team Spirit '93 paid great dividends toward successfully integrating UAVs into intelligence collection operations and the Korean theater airspace management process.

The 3d MI Battalion's interest in the UAV went far beyond Team Spirit '93, as it will be among the first units to receive the next generation UAV (UAV–SR), known as Hunter. Army fielding plans call for a UAV–SR company to be assigned to each corps under the aerial exploitation battalion of the MI brigade.

Pioneer in the Gulf

DUSTOFF KOREA

Major Joseph F. Miller
Commander
377th MEDEVAC Company (AA)
Republic of Korea

Captain Robert D. Mitchell
S2/3
52d Medical Battalion
Republic of Korea

SITUATIONS/ACTIONS

Situation: ***The steady rain of an early Korean spring chills the evening and swells the rivers. A tired high mobility multipurpose wheeled vehicle crew attempts to ford a river on a reconnaissance mission but is trapped by unexpectedly high waters half way across. The crewmembers climb on the hood of the stalled vehicle and look anxiously through the darkened night to their fellow soldiers who stand helplessly on the river banks. The river is rising quickly. The soldiers know that an attempt to move to the bank through the rushing water could result in a catastrophe.***

Action: ***Within minutes, a DUSTOFF crew arrives on the scene and, with the aid of night vision devices (NVDs) and the high–performance hoist, the highly trained DUSTOFF crew hoists the soldiers to safety.***

Situation: ***A critically injured soldier lies in a Korean hospital bed. He has been severely injured in an automobile accident. He is too unstable to evacuate to a U.S. Army medical treatment facility (MTF), but he is in desperate need of blood products that are unavailable at the Korean hospital.***

Action: ***A DUSTOFF crew rapidly transports the life-saving blood to the remote Korean hospital location. The soldier is eventually evacuated by a DUSTOFF crew to the 121st Evacuation Hospital, Seoul, Korea, in a specially configured aircraft to diminish the possibility of additional injuries.***

Situation: ***A Navy sea–air–land team (SEAL) is critically injured from an accident on ship during the Team Spirit '93 exercise. He is in dire need of the definitive medical care found only at the 121st Evacuation Hospital, Seoul. The injured SEAL is aboard a ship offshore the port city of Pohang on the eastern coast of Korea.***

Action: ***A DUSTOFF crew lands on the ship and transports the SEAL to the 121st Evacuation Hospital.***

OPERATIONAL READINESS

These are examples of the 377th Medical Company (Air Ambulance) (AA)'s excellent reputation for mission execution and completion of often-dangerous rescues. They exemplify the unit's high degree of readiness and professionalism. The company has the distinction of being the largest aeromedical evacuation unit in the Army Medical Department (AMEDD) and also the largest UH-60 Black Hawk company in the U.S. Army. This 25-ship Black Hawk unit maintains the highest degrees of operational readiness in the face of the belligerent North Korean threat. This readiness includes the conduct and maintenance of an aggressive aircrew training program (ATP) specifically designed to ensure DUSTOFF aircrews maintain the necessary proficiency to execute their wartime missions at a moment's notice.

MISSION

Besides this enhanced wartime readiness posture, the unit is charged with maintaining continuous aeromedical evacuation support to all U.S. Forces Korea (USFK) personnel on the Korean peninsula.

The 377th's mission is to deploy to wartime locations and provide aeromedical evacuation of selected patients from as far forward as the tactical situation allows and the emergency movement of medical material and personnel. Supporting this tough mission, and the basis for the unit's aggressive training and maintenance programs, is the unit's mission essential task list (METL). These tasks are—

- Conduct unit movement operations.
- Occupy, establish, and disestablish unit facilities and areas.
- Perform administrative, security/intelligence, logistical, and maintenance functions.
- Perform and maintain tactical aeromedial flight crew operations.
- Perform tactical flight operations.

BLACK HAWK

The Black Hawk is a proven evacuation platform for selected patients. It has been tested in every theater where

the U.S. Army has been deployed, including the harsh combat conditions of the recent Persian Gulf War. On a "standard day," the aircraft flies at speeds of up to 160 knots indicated airspeed in response to medical evacuation (MEDEVAC) requests. The standard UH-60A aeromedical configuration allows for the transport of up to four litters and two ambulatory patients.

The unit provides continuous aeromedical evacuation to USFK personnel and their dependents stationed throughout the Republic of Korea (ROK). In addition, Korean nationals who are employed by the Department of Defense as well as any Korean national who is injured as a result of direct or indirect U.S. military action are authorized aeromedical evacuation. Persons requiring evacuation who do not fall within the standard categories can be evacuated with permission from the Eighth U.S. Army Command group.

The 377th's important mission of emergency transport of medical personnel and equipment not only is a hallmark of the unit's extensive lift capability but a mission that is exercised on a regular basis to support real-world mission requirements. Because of the congested Korean road networks and the geographical dispersion of not only the tactical but also the medical units, the unit supports rapid transport of blood teams and emergency medical personnel by aircraft. The unit has not only the capability to haul the majority of its organic equipment to the field but also stands prepared to rapidly sling prepackaged medical material to forward MTFs. The unit also can assist with the movement of the MTF assemblages themselves to various battlefield locations.

ORGANIZATION

The 377th was established 13 January 1941 as Bravo Company of the 52d Medical Battalion and activated on 4 March 1941 at Fort Jackson, SC. It was reorganized and redesignated as the 377th Medical Collecting Company on 14 June 1944. After extensive World War II campaign participation, the unit was inactivated on 31 October 1945. It was most recently activated on 15 August 1962 in Korea as the 377th Medical Company (AA). The 377th is a subordinate unit of the 52d Medical Battalion whose mission is the command and control (C^2) of all tactical corps–level air and ground evacuation assets within the ROK. The 377th is the most widely dispersed unit within the 18th Medical Command. The unit consists of about 170 soldiers, Korean Augmentees to the U.S. Army, and contract aviation personnel who make up the six platoons of the company. The headquarters platoon is composed of the unit's C^2 and support elements (minus aviation maintenance) to include the standardization, safety, administrative, logistical, and operational sections.

This platoon is located at K–16 Air Base, Seoul, Korea. Two of the four flight platoons of the unit also are located at K–16 (figure 1). These flight platoons provide the direct and area aeromedical evacuation support to the 2d Infantry Division (ID). Each flight platoon is composed of about 25 rated and nonrated aircrew members who crew the platoon organic aircraft. These platoons maintain the Camp Casey field site at H–252 and are commonly referred to as DUSTOFF NORTH. The service and second flight platoons are at A–511, which is located on Camp Humphreys. The service platoon contains 11 different military occupational skills and is responsible for all unit–level aircraft maintenance—including overview of the flight platoon's maintenance programs.

The service platoon has test flight, backshop, unscheduled, and phase maintenance capability. The wide geographical dispersion of the unit presents particular challenges to the service platoon, as they stand ready to meet the scheduled and unscheduled challenges of this forward–deployed unit.

The second flight platoon, commonly referred to as DUSTOFF CENTRAL, provides aeromedical evacuation to the central region of the ROK. Most of its aeromedical evacuation missions originate from the MTFs located on Camp Humphreys and the U.S. Air Force (USAF) hospitals located at Osan and Kunsan Air Bases.

The third flight platoon is located on H–805. Camp Walker. DUSTOFF SOUTH is the most remote platoon of the unit and responsible for aeromedical evacuation from the southern tier of the ROK, including the U.S. training center on Cheju Island. The flight platoons provide continuous, immediate response aircrews from the three sites. One of the greatest challenges of this unit lies

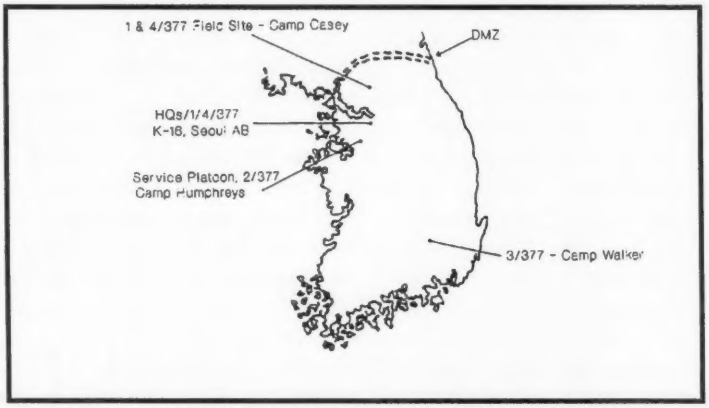


Figure 1. 377th Medical Company (AA) Platoon Locations

in maintaining the balance of this important real–world peacetime mission, the constant wartime readiness posture it must maintain, and the requirement to be able to execute a myriad of real–world contingency operations at a moment's notice.

TRAINING

The ROK is a unique environment for the employment of evacuation doctrine, as it allows evacuation to cross the lines of the division and corps MEDEVAC systems on a regular basis. Exercise of this division–to–corps interface as much as possible allows the documentation, analysis, and determination of the best way to support the combat division—the force that will rely the most on our corps–level evacuation services.

The 377th conducts day, night, and NVD aeromedical evacuation operations 365 days a year to USFK. As stated previously, the unit operates from four geographically dispersed locations. About 750 critically ill or injured patients were evacuated during the last year.

The aviation environment of the Korean peninsula is challenging, dangerous, and extremely unforgiving. The DUSTOFF aircrews perhaps know this better than any other aviation unit in the ROK, as they are required to conduct aeromedical evacuation operations at anytime, anywhere, and for anyone given the minimum weather execution criteria.

The unit's newly assigned aviators quickly discover flying in Korea is not like flying at Fort Rucker, AL. Rising terrain, routine marginal weather conditions, and the constant notice suspension of high–power tension lines challenge aircrews on a daily basis. Simply stated, the ROK is unforgiving to the unsafe and ill-trained aircrewmember—especially aircrews charged with the difficult and complex mission of aeromedical evacuation. For this very reason, the 377th executes the most dynamic and thorough ATP in the ROK.

The unit's mission, the METL, and the specified and implied tasks of wartime and contingency operational plans are the catalysts for the unit's aggressive ATP. The unit's Fiscal Year '93 Flying Hour Program, in excess of 5,000 hours, supports one of the most dynamic aircrew programs in the ROK. The program defines the training requirements necessary to maintain the wartime proficiency of the more than 120 rated and nonrated crewmembers of the unit. The ATP encompasses readiness level progression, annual proficiency and readiness test requirements, no–notice evaluation, hoist and external–load operations, specialized and intensive pilot–in–command (PC) qualifications, and special use airspace training peculiar to the ROK.

This airspace training includes but is not limited to procedural requirements of the highly sensitive demilitarized zone (DMZ), P-518, tactical zone/corridors, and the no–fly line. The 80-percent turnover rate after the normal 12–month tour requires an intensive PC selection and training program. The commander, operations officer, standardization officer, safety officer, flight platoon leaders, and current PCs are intimately involved in the PC selection process. Navigation skills are constantly emphasized. The slightest navigational deviation in the vicinity of the corridors, no–fly–line, or the DMZ could result in an international incident with grave consequences.

The 377th is tactically deployed in two general methods. First is the Area Support Concept. Under this plan, aeromedical evacuation assets are retained in the corps area, thus maintaining flight platoon integrity. The advantages of retaining these assets in the corps area include co–location with established logistical and maintenance bases security of aircrews and aircraft and close proximity to the evacuation battalion C^2 element. Disadvantages to this employment concept include lack of responsiveness to the combat division under degraded communication situations and slower response to mission requests during maneuver brigade realignment.

In the second method, or Direct Support Concept, evacuation teams are formed with the 377th's aeromedical evacuation assets and ground evacuation assets from within the evacuation battalion. The evacuation teams normally consist of two UH-60A aircraft and four M997 ground ambulances. These evacuation teams are sent forward for co–location with the division-level forward support medical companies. This forward positioning of integrated teams of corps–level ground and air evacuation assets in close proximity to the division–level medical companies facilitates rapid evacuation of selected patients to corps–level MTFs as well as enhances responsiveness to the additional corps evacuation missions. Forward positioning of aeromedical evacuation assets greatly enhances the unit's ability to evacuate selected patients but clearly mandates the ability of the unit to operate in the Combat Aviation Brigade environment.

The 377th routinely employs evacuation teams to support the forward and main support medical companies in the 2d ID. Experience has shown that these forward–deployed DUSTOFF aircrews have difficulty in securing the aviation support critical to battlefield operations and survivability such as forward arming and refueling point locations, Army airspace command and control (A^2C^2), aviation maintenance, and intelligence information.

Joint and combined arms training is vital for survival on the modern battlefield. Nowhere is this more important than in the ROK. In case of hostilities, the aeromedical evacuation of battlefield casualties will greatly enhance the ability of the AMEDD to conserve the fighting strength and support the battlefield commanders at all levels. It is conceivable U.S. aeromedical evacuation assets could be employed to evacu-

ate U.S. and ROK casualties to their respective MTFs. The 377th took part in training that tested this concept during the recent Team Spirit '93 exercise. DUSTOFF aircrews responded to mass casualty exercises involving the 1st and 3d ROK Armies. This highly successful training resulted in the unwavering confidence from both sides that technology, pride, and trained personnel can overcome a variety of challenges, including the language barrier to accomplish the mission.

Other joint and combined arms training has included deck–landing qualification with the 3d Marine Expeditionary Force (figure 2). This highly successful training was conducted on board the ***USS Belleau Wood*** before the Marines' amphibious landing on the Pohang beaches during Team Spirit '93. During the exercise, the 377th evacuated several U.S. Navy personnel to the ***USS Belleau Wood*** from the shore for further medical treatment. This included the transport of a Forward Area Surgical Team with an external load to the ship, exercising the unit's rapid movement of medical personnel and equipment.

Other training highlights include the unit's participation in numerous joint and combined exercises. The unit expanded its three immediate response sites to eight during the recent Team Spirit '93 exercise. This expansion included the employment of several evacuation teams in direct support of the 2d ID and the 25th ID. The unit deployed three aircraft and four aircrews to Thailand to support the Cobra Gold '93 exercise (figure 3). This real–world DUSTOFF support requirement enabled the unit to trainup in the areas of deployment on board USAF aircraft and many other areas associated with operating in a jungle environment. The 8th U.S. Army conducts a variety of command post exercises that allow the unit to test its C^2 abilities. These exercises include Ulchi Focus Lens, Foal Eagle, Valiant Usher, and Valiant Blitz.

The 377th recently initiated a unique and innovative training relationship with the USAF. The unit conducts monthly combat search and rescue (CSAR) exercises with the 38th Search and Rescue (SAR) Squadron at Osan Air Base. The search and rescue exercise usually begins with a situation briefing on the current air tactical situation (figure 4). The briefing includes aircrews from the Air Force who will be flying F–16, A–10, UH–16, and UH–60G aircraft as well as the DUSTOFF aircrew members. A typical scenario involves an F–16 strike against enemy air defense artillery sites with A–10 aircraft providing close support. The A–10s have the additional mission of marking downed aviator positions for CSAR pickup (figure 5). An example follows.

Scenario: An F–16 pilot is short down just as he crosses the line of departure. An airborne DUSTOFF aircraft in the vicinity is alerted and guided to the downed aviator position by the Airborne Early Warning and Control System, which has picked up the emergency beacon of the F–16 pilot.

The briefed scenario involves the shooting down of the DUSTOFF aircraft during the rescue attempt. We now find the DUSTOFF aircrew attempting to escape and evade with their USAF counterpart whom they were trying to rescue. After the scenario is briefed, the simulated downed aircrew members are inserted into a remote area somewhere in the Korean countryside. Aggressors are inserted just behind them. The downed aircrew members must escape and evade and reach a pre–briefed location for the pickup.

A–10 aircraft home-in on the emergency beacons from the PRC–90 radios. Once overhead, the A–10 pilot marks the spot and directs 38th SAR UH–60G aircraft to the designated spot (figure 6). The rescued crews are then flown safely to the rear for debrief. This is the type of training that may possibly keep DUSTOFF aircrews alive and available to perform their important mission in the event of hostilities.

The U.S. Army Medical Department Center and School at Fort Sam Houston, TX, and the U.S. Army Aviation Warfighting Center at Fort Rucker, AL, are currently developing new doctrine on aeromedical evacuation unit and aviation brigade relationships for the future battlefields. This emerging doctrine integrates command, control, communications, and intelligence (C^3I) and combat service support (CSS) relationships between aeromedical evacuation units and the aviation brigades.

Figure 2. Deck–landing qualification with U.S. Marines during Team Spirit '93

Lessons learned indicate that for aeromedical evacuation units to execute their mission and survive on the complex, integrated, and technologically ad-

Figure 3. Unit load aboard C–5 for deployment to Cobra Gold '93 in Thailand

Figure 4. USAF briefs DUSTOFF crews for SAR exercise

vanced battlefield, they must establish a relationship with the warfighters. Critical information, including A^2C^2, current intelligence, ground commander's intent, air traffic services procedures, weather, CSS, aviation safety, and standardization need to be accessible by the aeromedical evacuation commander for him to successfully employ his unit and complete the mission.

The 377th has undertaken a variety of initiatives to establish this relationship with the 17th Aviation Brigade. The unit participates in field training exercises and EXEVALs employing DUSTOFF aircraft in such roles as flying trail position of multiship deep attack or cross–forward line of own troops operations. This places the DUSTOFF crew as far forward as possible either from a larger site or in the loading zone, which greatly enhances reaction to MEDEVAC requests.

Aggressive training programs and constant quests for joint training with other units are the cornerstone of the unit's intense desire to live up to its motto of...**DUSTOFF MAKES IT HAPPEN!**

Figure 5. USAF and DUSTOFF crews awaiting CSAR pickup

Figure 6. USAF A–10 marking pickup area of downed aircrews

Combined Aviation Force Logistics

Major Stephen D. Combs
17th Aviation Brigade
Seoul, Korea

The 17th Aviation Brigade, headquartered in Seoul, Korea, is the largest forward–deployed aviation brigade in the U.S. Army. Two attack battalions, one assault battalion, one medium–lift battalion, and one air traffic control battalion comprise the brigade.

When we go to war, we fight as part of the Combined Aviation Force (CAF). The CAF includes the brigade and assets from the Republic of Korea (ROK) Army Aviation. Although we fight as one unit, support is along national lines. Logistical support for any aviation brigade is a challenge. In Korea, it is the same.

The U.S. side of this logistical support is somewhat different from what other organizations may be used to. As the theater's separate aviation brigade, the normal logistics support structure found in a division is missing. The higher echelon of support for us is the 19th Support Command. However, this support is provided by area.

Korea is divided into four separate areas with an area support group (ASG) in each. Since the brigade is spread all over Korea, our battalions do not obtain supplies and maintenance from the same ASG, depending on the geographical area in which they are positioned. In different areas, a different ASG provides support. Furthermore, when we deploy to the field, logistical support comes from the ASG in that region. Units not normally located in that specific region have to open accounts with the supporting ASG to obtain supplies during the field problem. Since the CAF fights as one unit, there may be a need for us to obtain more supplies from the ROK units.

In different areas, a different ASG provides support.

Although the ROK units and the U.S. units virtually have the same type of helicopter that uses the same type of fuel and ammunition, ideas for logistical support are different.

In the United States, Army Aviation units normally are placed under operational control of the ground maneuver force. This means they are responsible for providing their own support. Moreover, as doctrine has developed over the years emphasizing a highly mobile fighting force, the logistics support structure also has developed to support this highly mobile and flexible force. In the ROK Army, however, concepts of support have developed differently.

In the ROK Army, the ground maneuver force provides support to its aviation assets. Moreover, instead of fighting a fluid battle the way the United States would, the ROK units tend to fight from fixed bases with their logistical support being provided from these bases as well. Instead of having mobile 2,500–gallon (gal) trucks to transport fuel, they store fuel in 50–gal drums and deliver these to units when needed.

Although there can be problems crossing national lines for support, all members of the CAF are dedicated to the mission of defending the Korean peninsula when needed. It is a mission the 17th Aviation Brigade and our ROK counterparts are proud to undertake.

Controllers for the 4-58th Aviation Regiment, Korea, direct aircraft at a tactical assembly area with the AN/TSQ-97A control tower.

Guardians in the Republic

The Guardians of the 4th Battalion, 58th Aviation Regiment, South Korea, remain on watch, focused on sharpening their tactical proficiency to safeguard the skies "round the clock."

Captain Timothy J. O'Neil
Air Traffic Control Liaison Officer
4th Battalion, 58th Regiment
Republic of Korea

The RC-12H is short final on a precision approach radar for runway 32. The weather is miserable as the crew returns from a night mission to gather intelligence on the second largest Communist army massed along the 4-kilometer (km) wide demilitarized zone.

The pilot is ready to execute the published missed approach as the low fuel light illuminates. The radar controller calmly indicates the aircraft is at decision height.

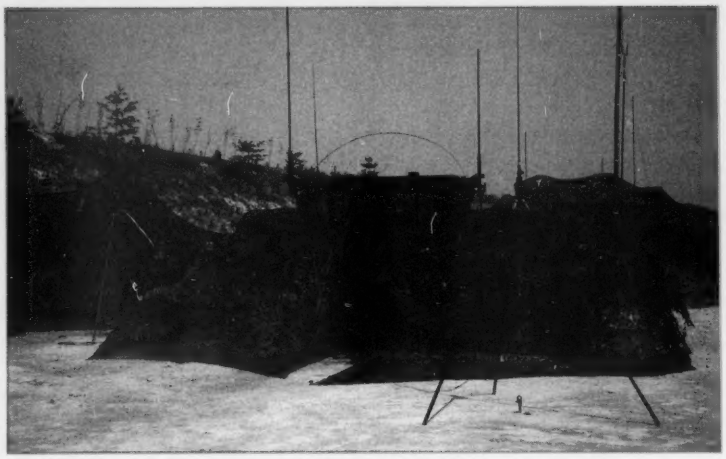
The copilot reports landing lights and threshold in sight and brings the aircraft to a safe landing.

A ground crewman meets the aircraft and whisks away the intelligence data. The aircrew and radar controller each breathe a little easier.

One hundred kms to the north, a faint crackle is heard on a single-channel ground and air radio system (SINCGARS). A flight of five UH-60 Blackhawks, with pilots and crewmembers under goggles, request landing instructions as they return to their tactical assembly area.

Their insertion was successful. Recognizing the aircraft's tactical call sign, the controller instructs the flight to land to the south.

The pilot "Rogers" the controller.



The AN/TSW-7A control tower employed in an assembly area.

Seconds later, the swirling dust cloud can be felt from the tight formation as the aircraft safely touchdowns.

The controller switches off the goggles and patiently awaits the return of two OH-58Ds on a night reconnaissance mission.

Recovery of aircraft under instrument meteorological conditions (IMC) and employing tactical air traffic service (ATS) teams are just a few of the varied missions the 4th Battalion (Bn), 8th Aviation Regiment (Regt), performs each day in the Republic of Korea (ROK).

Daily, "Guardian Soldiers" provide tactical- and fixed-base ATS to the Eighth United States Army, Combined Forces Command, and the United Nations Command in South Korea.

To accomplish this mission, the battalion is structured with two ATS companies and a headquarters company. The two companies control at all U.S. Army airfields within the Republic.

Alpha Company provides ATS at four airfields and heliports north of Seoul. Bravo Company provides ATS at three airfields and heliports to the south.

Bravo company is also responsible for the Flight Operation Center-Korea (FOC-K), or "Guardian Control," located in Seoul. Through the use of remote radio sites and in cooperation with ROK Flight Coordination Centers (FCCs), FOC-K is able to flight follow and provide advisories to aircraft throughout most of the Korean peninsula.

In the event of North Korean aggression, the 4th Bn, 58th Avn Regt, will perform critical airspace command and control (A^2C^2) and provide ATS in this theater.

Operation Desert Storm demonstrated the complexity of joint airspace requirements, making it necessary to synchronize users to reduce the risk of fratricide.

Air traffic controllers in Korea not only must think "joint," but also must work in a "combined" environment. Guardians must be ready to coordinate safe, effective, and flexible use of airspace in a tactical environment to support U.S. Army, Air Force, and Marine Aviation forces and ROK Aviation units.

Mission training is realistic, because it is the same terrain fought over 40 years ago and may be fought over again.

Guardians work directly with the ROK Aviation forces daily. Technology has made it easier. Through the use of a bilingual Theater Automated Command and Control Information Management System (TACCIMS), U.S. and ROK units are fiber optically connected. They interface directly with the Master Control Reporting Center, which provides radar coverage of ROK. This link maintains constant communication with the air defense forces in Korea and the Capital Defense Command which controls the sensitive airspace around Seoul.

Upon an outbreak of hostilities, the 4-58th would extend a flight following network of FCC across the area of operations.

Commanders and aviators will use FCCs to enhance the synchronization of aviation operations and flight safety.

The battalion's wartime mission requires both companies to deploy to locations in support of U.S. and ROK Aviation forces.

Tactical flight coordination centers using AN/TSC-61B shelters will deploy to one of several mountain top locations to optimize their communication capability.

FCCs provide in-flight advisories, flight-following services, weather, and information on special-use airspace that could impact aviation missions.

The 4-58th Avn also installs, operates, and maintains nondirectional beacons (NDB) and ground control approach radar (GCA) to assist air crews recover during IMC.

They also emplace tactical beacons into operation for selected missions to provide guidance and orientation, and for possible use in cross-flot or deep operations.

The AN/TSW-7A tactical tower and the AN/TSQ-71B radar are set up at tactical airstrips in the division and corps areas. They can assist aircraft troop movements, resupply, and medical evacuation.

On the fluid battlefield, the 4-58th uses their airmobile version of a

control tower consisting of a three-man tactical team.

The AN/TSQ-97 can be emplaced for controlling forward arming and refueling points or tactical assembly areas.

The rapidly changing pace of air operations requires dedicated assets to assist commanders and air crews during the planning and execution of their missions to ensure success and victory.

The Army is the biggest user of airspace, so it is crucial that 4-58th exchange information about airspace usage with all agencies in the joint and combined arena.

The 4-58th has established a liaison officer (LNO) network to deal with the complexities of theater airspace.

Their objective is to ensure the most effective employment of combat power to airspace users whose unrestricted use may result in loss of friendly air assets. They must do this without inhibiting the application of ground-based combat power.

Airspace deconfliction is a significant contribution to success on the battlefield. Thorough coordination of key information can prevent conflicts from ever occurring.

LNOs are primarily senior noncomissioned officers from the line companies with special training and extensive air traffic control (ATC) experience.

It spans from the battalion's full time liaison staff operating out of the hardened Tactical Air Control Center, down through the ROK field armies, the 2d Infantry Division, and the Combined Aviation Force.

The LNOs are the airspace representatives in the Army A2C2 element. They help the commander plan the battle using airspace control measures. LNOs coordinate the mission information into the theater Integrated Tasking Order (ITO) that is disseminated to all major headquarters on the battlefield.

Before a mission ever makes it into the ITO, the mission has been scrubbed at each level for airspace conflicts using the Combat Airspace Deconfliction System (CADS).

This computer program allows the LNO to input all times, altitudes, locations and affected airspace of all events to occur. CADS graphically display them on a computer screen and identify any airspace conflicts.

If conflicts occur, the LNO attempts to resolve them. He does this by advising the aviation commander to change the time, location, altitude, or accept the risk. The FCCs will then be advised to assist and advise affected airspace users to the potential conflict. The success of this system has been demonstrated during each major training exercise.

An air traffic controller adjusts his camouflage on his FCC shelter.

ATC soldiers perform the same mission in garrison operating at any of the 13 fixed sites throughout Korea. A 93C must complete a through hands-on training program before receiving an ATC rating.

Alpha Company headquarters at Camp Red Cloud manages and operates towers at Camps Mobile, Stanley, LaGuardia, and Page. It also maintains three radios sites on remote mountain top.

FCCs Evenreach, Warrior, and North. Bravo Company located in Seoul is responsible for operating FOC-Korea, whose mission is to flight follow with all visual flight rules aircraft in the ROK.

They also provide flight advisory services to en route aircraft, conduct communication searches for overdue aircraft, and disseminate Airman's Advisories to ROK and U.S. aircraft and airfields.

Bravo company provides ATS at Desiderio Army Airfield (AAF), Camp Humphreys, the largest and busiest instrument AAF in the Pacific Area. It also operates the VIP heliport in Yongsan (H-208) and control tower at Camp Walker (H-805) in Taegu.

Flying in the challenging Korean environment—mountainous terrain, harsh weather, and the enemy threatening within close range—is inherently dangerous. Add to those conditions, remotely piloted vehicles, precision guided munitions, fast movers capable of flying lower and faster, and facing enemy weapon systems.

The Guardians of the 4-58th Aviation Regiment, remain on watch, focused on sharpening their tactical proficiency to safeguard the skies "round the clock."

AVIATION PERSONNEL NOTES

Attention Commanders and WOs

The new Warrant Officer Education System (WOES) operates under a select–train–utilize concept. Thus when warrant officers (WOs) are selected for promotion, they must attend mandatory leader development training to achieve the military education level required for the new grade. Officers selected for promotion to Chief Warrant Officer Three (CW3) attend the Warrant Officer Advanced Course. CW4 selectees attend the Warrant Officer Staff Course. CW5s attend the Warrant Officer Senior Staff Course.

The U.S. Total Army Personnel Command automatically schedules officers to attend leader development training as soon as possible after the promotion list is released. Commanders should expect their promotable officers to attend training sometime during the year. To avoid conflicts with mission or personal requirements, WOs should first consult with their commander to identify attendance opportunities. Officers to be promoted should then contact their career manager for class scheduling. They should begin arranging class attendance soon after the promotion list release because of limits on class size.

Because annual class quotas and travel budgets are based on promotion rates, deferment requests generally will not be approved. WOs who fail to attend leader development training during the year promoted are behind their contemporaries in military education level. This lack of training could be a serious disadvantage during a reduction–in–force or selective retirement board.

As the Army continues to downsize, warrant officers must be actively involved in managing their own career including training. Commanders should support the WOES by ensuring that their WOs attend leader development training when scheduled.

AWO Career Update

In May, the Deputy Chief of Staff for Personnel approved a major change to Army Regulation 611-112, ***Warrant Officer Military Occupational Specialty Codes***. This change balances Aviation warrant officer (AWO) rank coding; updates military occupational specialty (MOS), additional skill identifier (ASI) and special qualifications identifier (SQI) codes; depicts four-level position coding; standardizes position descriptions; aligns AWO utilization with the Warrant Officer Management Act and the Warrant Officer Leader Development Action Plan; and creates a fourth career track.

With the exception of special electronic mission aircraft and medium helicopter organizations, this approved change allows documentation of four Chief Warrant Officer Five (CW5) positions in each brigade, group, and regiment staff and four CW4 positions on each battalion (including one for aviation intermediate maintenance) and squadron staff. Aerial exploitation battalions and medium helicopter battalions will have four CW5 positions on the battalion staff.

MOSs 154A, CH–54 Tarhe pilot, and MOS 154B, CH–47A/B/C Chinook pilots, have been eliminated.

The following ASIs have been eliminated: B4 (EH–1), C1 (CH–47A/B/C), C4 (CH–54), D1 (AH–1G Cobra), E1 (U–8 Seminole), and E2 (T–42 Cochise).

The following ASIs have been created: A4 (OH–58D Kiowa Warrior), F–4 (RC–12K/N), G7 (Aviation Related), H–3 (Aircraft Survivability Equipment/ Electronic Warfare), K–5 (MH–60K), and K–6 (MH–47E).

SQIs H (Standardization Instructor Pilot) and I (Tactical Operations Officer) have been created. With the creation of SQI I, Tactical Operations Officer, AWOs now have four career tracks to follow—safety, training, maintenance, and operations.

Except for special operations aviation, the new four–level position coding for tables of organization and equipment units requires each CW3 to possess an SQI with vertical career development potential. Special operations aviation pilot positions are graded for

CW3s. Vertical career development SQIs are SQI B (Aviation Safety Officer), SQI C/F/H (Instructor Pilot/Instrument Flight Examiner/Standardization Instructor Pilot), SQI G (Aviation Maintenance Officer/Aviation Materiel Officer), and SQI I (Tactical Operations Officer).

"Officer" replaces the word "technician" in AWO position descriptions. The change recognizes the leadership role of AWOs.

The above changes will be incorporated into the Aviation Restructure Initiative. The September 1993 AWO Personnel Plan and Career Guide will have a detailed discussion of these changes.

Questions from the field should be addressed to Commander, U.S. Army Aviation Center, ATTN: ATZQ–AP (CW5 Brown), Fort Rucker, AL 36362–5035, or call CW5 Brown at DSN 558–4313.

U.S. Army Aviation Proponency Office

Readers may address matters concerning aviation personnel notes to: Chief, Aviation Proponency Office, ATTN: ATZQ–AP, Fort Rucker, AL 36362–5000; or call DSN 558–5706/2359 or commercial 205–255–2359.

U.S. Army Class A Aviation Flight Mishaps

Fiscal Year	Number	Flying Hours	Rate	Military Fatalities	Total Cost (in millions)
FY 92 (through 30 June)	17	979,272	1.74	9	$65.0
FY 93 (through 30 June)	22	968,038 (estimated)	2.27	22	$96.2

IT'S AS EASY AS A, B, C

Sergeant First Class Tom Little
Air Traffic Control Specialist
U.S. Army Aeronautical Services Agency
Cameron Station, Alexandria, VA

"What do you know about the reclassification of airspace in the United States?" This question was addressed in the November/December 1992 issue of the **Digest** in the USAASA Sez article, "The Airspace Reclassification Process." However, as the time draws closer for the reclassification to take effect, it's time for another look at the process.

The reclassification process is a phased changeover to a new configuration of airspace. The process started on 15 October 1992 and will be completed by 16 September 1993. As information has become available, the U.S. Army Aeronautical Services Agency has updated Army Aviation through the January and March 1993 issues of the **Flight Information Bulletin**.

On 1 June, the Federal Aviation Administration (FAA) Air Traffic Rules and Procedures Service distributed the September editions of the Federal Aviation Administration Handbooks (FAAHs). Those handbooks are FAAH 7110.10 (**Flight Services**), FAAH 7110.65 (**Air Traffic Control**), FAAH 7210.3 (**Facility Operation and Administration**), FAAH 7930.2 (**Notices to Airmen**) and the **Airman's Information Manual**. These publications outline the upcoming procedural changes. The publications were distributed well in advance of their normal scheduled dates to ensure training time for the Airspace Reclass Change. The effective date of these publications is 16 September 1993.

By now, Aviation commanders should have ensured that Flight Safety and Standards, Quality Assurance offices, and Air Traffic Control (ATC) facilities have been working together to prepare and train all personnel by the September date. Debate and discussion on the changeover may be part of this training. The ideal aviation debate, of course, includes both pilots and controllers. The following questions show some of the issues and procedures affected by the reclassification.

- If an arrival extension is magenta, do you have to contact ATC to transition that extension?
- What classes of airspace will allow special visual flight rules (SVFR) operations?
- What is an example of the new SVFR phraseology?
- If Class D airspace is not operational 24 hours a day, 7 days a week, what class of airspace does it become when the Class D airspace is not in effect?
- What is the definition of the term "surface area"?
- If an aviator calls a Class D facility and the controller says "(aircraft call sign) standby," can the aviator enter the Class D airspace?
- Are you aware that if you are on an instrument approach into an airfield located in Class E airspace (ceiling 1,000 feet, overcast), when you break out of the clouds there could legally be a helicopter on final approach in front of you and not talking with ATC or Advisory Service?
- When you operate in the National Airspace System, on 16 September, which will take precedence, the federal laws or Army regulations (ARs) (for example, the distance from cloud requirements to operate VFR in Class B airspace or the distance from cloud requirements outlined in Table 5-1 of AR 95-1)?

Air traffic controllers or air traffic and airspace officers should have already reviewed letters of agreement and coordinated with the appropriate FAA controlling agency to modify and change any agreements as necessary. Facilities should be in the final stages of training in preparation for the deadline.

Aviators should have already noticed charting changes on many VFR charts and be aware that airspace around airports will not be depicted on instrument flight rules charts. Aviators should have also studied and prepared to fly in the new National Airspace System. The Airspace Reclassification Process is nearly complete and will become law on 16 September.

In closing, I have one final question—with the answer: Is there an airspace hierarchy? Yes, within the airspace classes, there is a hierarchy, and in case of an overlap of airspace, Class A preempts Class B, Class B preempts Class C, Class C preempts Class D, Class D preempts Class E, and Class E preempts Class G. I wonder what happened to Class F?

Remember, it's as easy as A, B, C.

U.S. Army Aeronautical Services Agency

USAASA invites your questions and comments and may be contacted at DSN 284–7773/7984 or write to: Commander, U.S. Army Aeronautical Services Agency, ATTN: MOAS–AI, Cameron Station, Alexandria, VA 22304–5050.

Recruiting A&P Licensees

Lieutenant Colonel James E. Sutton
Deputy Assistant Commandant, National Guard
U.S. Army Aviation Logistics School
Fort Eustis, VA

Aviation repairers may reach the flight line sooner if a new proposal to encourage enlistment of qualified vocational–technical (VO–TEC) school graduates is approved. Under the proposal, VO–TEC graduates holding the Federal Aviation Adminstration (FAA) airplane and power plant (A&P) license would receive various incentives for enlisting in some aviation maintenance specialties. These enlistees would then undergo an abbreviated training cycle before being assigned to an aviation unit.

The FAA sets the standard for the nation's aviation repairers with its A&P examination. Some of the candidates for this license complete the experience requirements under Federal Aviation Regulation (FAR) Part 65. About 200 VO–TEC schools teach FAR Part 147 using FAA curricula. Both approaches yield the successful candidate the coveted A&P license. If the Army could use civilian VO–TEC schools as feeder institutions for the U.S. Army Aviation Logistics School (USAALS), then we could husband the Army's resources for training tasks unique to Army Aviation.

The FAA requires that the A&P VO–TEC schools train a minimum of 400 hours on general aviation tasks, 750 hours on airframe, and 750 hours on power plant. This compares favorably to the number of hours a Military Occupational Specialty (MOS) 67N soldier receives in training during advanced individual training (AIT) and the Basic Noncommissioned Officer Course (BNCOC). Thus the relative value of the A&P enlistee's services should be much greater than those of the ordinary AIT graduate. The A&P enlistee starts out as a journeyman. The ordinary soldier only reaches this level after BNCOC, perhaps after 4 years of a 6–year enlistment.

However, most A&P VO–TEC schools concentrate their maintenance training on airplanes, not helicopters. The greater depth of an A&P–licensed enlistee's aviation maintenance training should make it possible to train on a specific weapon system in a much shorter time than for the ordinary enlistee.

The instruction specific to a weapon system (MOS) delivered to an A&P recruit would not only be familiarization but also would concentrate on diagnostic tasks. As a result, the course would borrow heavily from the BNCOC courses for these MOSs. Because the aviation BNCOC courses are taught at USAALS, the required subject matter experts or instructors are trained and available there. Therefore, any A&P VO–TEC initiative test should be conducted there.

The contemplated test of the A&P VO–TEC initiative includes plans to train A&P enlistees in 4–week courses presented monthly. During the first 8 to 10 days, the classes would be consolidated and taught a tailored Army maintenance system and Army manuals front load. The efficiency gained from consolidating the front load of the courses is part of the savings. Once the front–load course work has been completed, the classes would split out into tracks for the specific weapon system. The A&P soldier would graduate as a 67N, 67V, or 67Y with a BNCOC skill level. However, as an A&P, he would have 68B, 68D, and 68G MOS skills as well. He would be promoted to specialist after AIT and assigned to continental United States stations for followup, where units would track his progress via an FAA–style job book.

The trained man–year (TMY) is the value of an individual's services available to an employer after the individual has completed training. In the case of A&P enlistees under the proposed program, the A&P cohort TMY would be increased by the period not trained in conventional AIT. This period varies by MOS: 7 weeks, 2 days for 67Y; 6 weeks for 67N; and 4 weeks, 4 days for 67V. The TMY value or quality factor for an A&P recruit trained in this fashion also is higher because the training the A&P enlistee brings to the Army is valuable.

The presently configured Army Civilian Acquired Skills Program (ACASP) permits an A&P licensee to enlist for any one of four MOSs. The ACASP enlistee is deemed qualified after completing basic training without further AIT and reports to his unit. The ACASP A&P recruit is awarded the MOS and promoted to specialist after a brief orientation period (8 weeks) in his first unit. The value of A&P training to the Army is illustrated by the period the conventional enlistee takes to become trained in these MOSs. The combined length of the training for these four MOSs is 60 weeks, 2 days: 15 weeks for 68G10; 19 weeks, 1 day for 68B10; 16 weeks for 68D10; and 10 weeks, 1 day for 68H10 (taught at Sheppard Air Force Base, Wichita Falls, TX).

Although table of organization and equipment units have standardized structures, some units are staffed with a lower priority and, thus, a lower percentage of fills for their personnel requirements. Placing A&P soldiers in these units could help relieve the maintenance pressure for several short MOSs. An A&P soldier could maintain the aircraft on the flight line, remove components and repair them in the shop, and replace them on the aircraft. These highly skilled soldiers also would be valuable manpower multipliers if assigned to units that are forward deployed or deploy early, such as the 2–160th Special Operations Aviation Regiment, Fort Campbell, KY. The A&P soldiers (in the appropriate MOSs) would be

able to perform multiple levels of maintenance in forward–deployed areas with minimal other support personnel.

The ability of U.S. Army Recruiting Command (USAREC) to produce the number of A&P enlistees required is a concern. The mean salary paid by the airline industry to a new A&P licensee is far higher than that paid to an ACASP enlistee (specialist). Because civilian job opportunities compete for the A&P licensees, recruiting incentives to attract A&P licensees are a necessary element of any A&P VO–TEC initiative. The TMY value of the A&P enlistee's services must merit these incentives.

The USAREC recruiters have a mission to produce a certain number of recruiting contracts monthly. Experience has shown that high schools, rather than technical schools or community colleges, produce more contracts per hour invested. Unlike high schools, however, A&P VO–TEC schools start and finish a class every quarter or semester. VO–TEC schools are a source of high–quality enlistees (all high school graduates) who have demonstrated an aptitude for technical training. Even if all the accession needs for any MOS could not be met by the A&P VO–TEC school graduate pool, the benefits to the Army make it worthwhile to create the possibility.

Earlier this year, a USAALS survey was sent to 200 VO–TEC schools inquiring about their program. Fifty student attitude surveys were included with each mailing. The students were asked about their inclination to enlist and to rate incentives that might entice them to enlist. The results of more than 2,500 student survey responses returned from more than 80 schools have been compiled. About 7 percent expressed an interest in joining the military. More than 14 percent did not have definite postgraduate plans, and about 14 percent were interested in further education. Although the rest expressed an interest in commercial aviation (such as airlines and manufacturers), more than 57 percent found some enlistment incentives attractive. The responses reveal that incentives most attractive to A&P VO–TEC students are early promotion for higher pay, further education benefits, selection of aviation maintenance speciality, bonuses, and selection of unit assignment. The preference of educational benefits and professional focus over bonuses is unusual. The preference may be a further indication of the quality of this targeted group. Student loan repayment programs placed third among A&P students attending nonpublic schools but ranked very low among public school students.

Integral to the A&P VO–TEC initiative is the revision of Army Regulation (AR) 601–210, Chapter 7, 1 August 1991, to accommodate the abbreviated AIT and align the ACASP regulation more closely with the aviation maintenance needs of the Army. AR 135–7 will require revision to permit soldiers who accept full–time support positions to continue to receive recruiting incentive benefits.

The VO–TEC test awaits the approval of these regulatory revisions by the Headquarters, Department of the Army (HQDA), Deputy Chief of Staff for Personnel (DCSPER). If USAALS proposals are approved, ACASP Regulation 601–210 will be changed to include the A&P license as a prerequisite for eight 67 career management field (CMF) MOSs. We hope that the DCSPER also will task USAREC to target post–secondary VO–TEC schools teaching FAR Part 147 A&P curricula for a special recruiting effort under the revised ACASP rules this summer. We will ask HQDA DCSPER to offer enlistment bonuses, enhanced educational benefits (Army College Fund) and student loan repayment incentives to enlist enough A&P licensees (VO–TEC or otherwise) into test MOSs (86 into 67N, 75 into 67V, 72 into 67Y) during fiscal year (FY) 1994.

The Assistant Deputy Chief of Staff for Training, U.S. Army Training and Doctrine Command, awaits the results of the DCSPER meeting before committing funds required to pare the 67N, 67V, and 67Y courses into the abbreviated A&P AIT format. Because of the aviation restructuring initiative and the requirement for massive transition training from the Bell airframes by FY 96, the test MOS may be changed to 67T.

Implementation of the USAALS MOS–consolidation initiative could be accelerated by the A&P VO–TEC test. The more lengthy courses expected to result from MOS consolidation may be greatly reduced for the A&P licensed soldier. Because the technical proficiency objectives for Aviation Branch include an A&P license for all Advanced Noncommissioned Officer Course graduates, these A&P enlistees would have an edge over their non-A&P contemporaries. This edge could be an incentive for others to accumulate the required hours of experience and education to become licensed as an A&P and remain competitive.

The greatest benefit to the Army occurs after eventual consolidation of 67 CMF MOSs into four or five MOSs after FY 2000. The combination of all tasks to be trained in all the individual training plans for these MOSs will accumulate many tasks in which to train any single individual. Many of these tasks may be exported to the field for training to avoid excessive course lengths to train all the required skills. The purchase of pre–accession VO–TEC front–end training through incentives could save the Army training base capital and operations and training development funds. The Army investment in these assets would be maximized by concentrating on specific weapon systems rather than the general aviation maintenance subjects. Once Army persuades VO–TEC schools to "saturate" the A&P market with graduates for its requirements, the relative value of an A&P license in the civilian market should migrate closer to Army compensation, thus easing recruiting.

U.S. Army Aviation Logistics School

Readers may address matters about aviation logistics to: Assistant Commandant, U.S. Army Aviation Logistics School, ATTN: ATSQ–LAC, Fort Eustis, VA 236045415.

Future Vision—ATS

Mr. H. Bruce Peterson
U.S. Army Air Traffic Control Activity
Fort Rucker, AL

As the sole remaining superpower, the United States must react to world events (political, economic, and security) that will shape its future. Our recent involvements in Southwest Asia, Somalia, Central and South America, and Bosnia indicate we may be participating with coalition forces in future world conflicts.

Based on previous and current events, Aviation and Air Traffic Services (ATS) will play a significant role throughout military and humanitarian operations. These operations will probably occur in restricted strategic and tactical airspace, requiring systems interoperability and interfacing with all airspace users.

Our National Security Strategy refers to power projection as one of the principles of our national defense. Power projection is the ability to apply all or some of the elements of our national power (political, economic, informational, and military). The military component of power projection is force projection, which is our capability to mobilize, deploy, and sustain the employed force and redeploy and demobilize military forces for missions across the spectrum of military operations. How well we equip and train our ATS force determines our ability to support force projection with ATS, both from the United States and from forward–deployed locations.

Our overseas presence is being reduced while our regional focus has been enhanced. Thus, airlift and air interdiction, supporting and sustaining materiel, combat replacements, and communications are critical parts of our military strategy.

Long–range aviation ATS planning is required to support the National Defense Strategy, Department of Defense (DOD) guidance, military strategy, Army mission, Aviation Branch, and worldwide commitments. Highly reliable ATS systems must be able to support various types of aircraft in low– to mid–intensity and high–intensity warfare. Commonality of equipment and training and interoperability will create a greater challenge to our ATS force design effort. Task–organizing and incorporating our force within the command and control structure of a joint service operation are expected to be the pattern of the future.

A total DOD–ATS future concept is envisioned for joint service operations. The primary benefit of such action would include a more efficient use of the available airspace that has reached the point of saturation over and outside the area of operation. The total DOD system integration approach would provide for controlling higher levels of traffic density and for increased efficiency through standardization of the airspace control of traffic.

As the global situation changes in the wake of the Cold War, the evolution of warfighting doctrine continues. Because of dollar constraints and a force reduction, multiservice involvement is expected to play a much greater role in our warfighting efforts to support combat, combat support, and combat service support operations. An increase in the joint service doctrinal knowledge base will be necessary to develop new tactics, techniques, and procedures to meet the changing global threat.

Operational requirements for tactical air traffic control hardware will focus primarily on ATS support of the Army Airspace Command and Control System required for force projection operations. During low–intensity conflict (LIC), Army ATS will support joint and multinational aviation assets conducting foreign internal defense, terrorism or antidrug counteraction, peacekeeping, disaster, and contingency operations. Support of special operations, civil affairs, LIC, and psychological operations will increase. We will train for all regions and be knowledgeable of the interoperability and integration of each military service's software and hardware. Our hardware will be lighter, smaller, and completely automated. Decisions for ATS hardware acquisition will consider other services' requirements. Commonality, interoperability, and joint acquisition will be the standard and strategy for cost savings and avoidance.

As stated in our National Security Strategy, we must be able to move men and materiel to the scene of the crisis at a pace and in numbers sufficient to field an overwhelming force. Army ATS is planning to be successful in meeting the future Aviation ATS requirements for our national security.

U.S. Army Air Traffic Control Activity

Readers may address matters concerning air traffic control to: Commander, USAAVNC, ATTN: ATZQ–ATC–MO, Fort Rucker, AL 36362–5265.

Transportation Demonstration of the OH-58D Kiowa Warrior

Mr. Robert J. Szerszynski
U.S. Army Test and Experimentation Command
Fort Hood, TX

A 10–minute oil change is nothing compared to what two aviation teams can accomplish in 15 minutes. Each team from C Troop, 4th Squadron, 17th Cavalry, Fort Bragg, NC, can unload an OH–58D Kiowa Warrior from an Air Force C–130 Hercules aircraft and have the helicopter in the air in less than 15 minutes.

The two teams proved their know–how earlier this year in a demonstration at Pope Air Force Base, NC. Each team of five had one noncommissioned officer in charge/technical inspector; two OH–58D pilots; and one OH–58D crewchief. The fifth team member of each team was an enlisted soldier; however, one team had an avionics technician as its fifth member, while the other had an armament repair technician to complete its team of five.

The clock keeps ticking as soldiers unload an OH-58D from a C-130 and prepare it for flight in less than 15 minutes.

The demonstration was part of the U.S. Army Test and Experimentation Command (TEXCOM), Aviation Test Directorate, OH–58D Kiowa Warrior Force Development Experiment. The OH–58D Kiowa Warrior is a basic OH–58D enhanced by an integrated weapon suite.

Also added to the aircraft were a rapid deployment kit and a multipurpose light helicopter capability. The rapid deployment kit consists of kneeling landing gear, foldable horizontal and vertical stabilizers, folding weapon pylons, hoist for the mast-mounted sight, and ramp extensions for the rear ramp of the C–130.

Contingency operations dictate that the OH–58D Kiowa Warrior be transportable in the C–130 aircraft to execute a forced entry mission. Thus it must be easily and rapidly deployable to forward areas using assigned equipment and crew. Upon arrival, the aircraft must be rapidly unloaded and reassembled to fly—within 15 minutes. This test simulated just such a mission.

The C Troop soldiers themselves developed the transportability procedures. After practicing these procedures, the teams were ready to test their skills and training.

Before the demonstration, the teams prepared two Kiowa Warriors for shipment. The helicopters were then loaded into a C–130 by a joint Army and Air Force crew. As the ramp door closed, the countdown for the test began.

In a simulated arrival at the destination, the C–130's cargo door opened. The stopwatches clicked on when the ramp hit the tarmac. As 2 minutes and 30 seconds ticked by, the first Kiowa Warrior was unloaded. At 5:45, the second was out of the C–130. The first Kiowa had its engine running after 9 minutes. The second Kiowa Warrior was cranked at 13:07. Both helicopters were off the ground as the stopwatches clicked a time of 14:30.

This transportability demonstration is only one part of TEXCOM's testing of the Kiowa Warrior. Later this year, field testing will be conducted with the Combat Aviation Training Brigade at Fort Hood, TX. The data collected by TEXCOM will be used for a full materiel release decision.

U.S. Army Test and Experimentation Command

Readers may address matters concerning test and experimentation to: Headquarters, TEXCOM, ATTN: CSTE–TCS–PAO, Fort Hood, TX 76544–5065.

SDT: A Measure of Success

The Army's new self–development test (SDT) for sergeants, staff sergeants, and sergeants first class is nearing the end of its second year. By now, most Active Army noncommissioned officers (NCOs) in these ranks have taken the SDT at least once but not for the record. The Army senior leadership directed that the first 2 years of the SDT be for assessing, debugging, and fine–tuning the SDT. Although soldiers have been taking the SDT, scores have not yet been used for decisions affecting their careers.

The 2–year validation period is coming to a close. While the validation will continue another year for the Reserve Component, Active Army NCOs will begin testing for record in fiscal year 1994. This means that SDT scores will be entered into NCOs' personnel records and will influence important decisions affecting their careers such as promotions and school selection. The SDT will become an integral part of the Army's Leader Development Program. As an NCO, what does this mean for your development as a leader and for your future military career?

Self–development is one of the three important pillars of leader development. A former sergeant major of the Army described it as probably the most neglected pillar. There are reasons for the neglect. Self–development is not something an NCO, or anyone else, has to do today. It can be put off until next week, or next month, when perhaps there will be more time. Then, if a day does come along when you have some spare time for self–development, what do you do? Read a book? Which book? Practice a skill? Which skill? Solve a problem? Which problem? If you do any of these, how do you know how well you have done? Do you get any feedback?

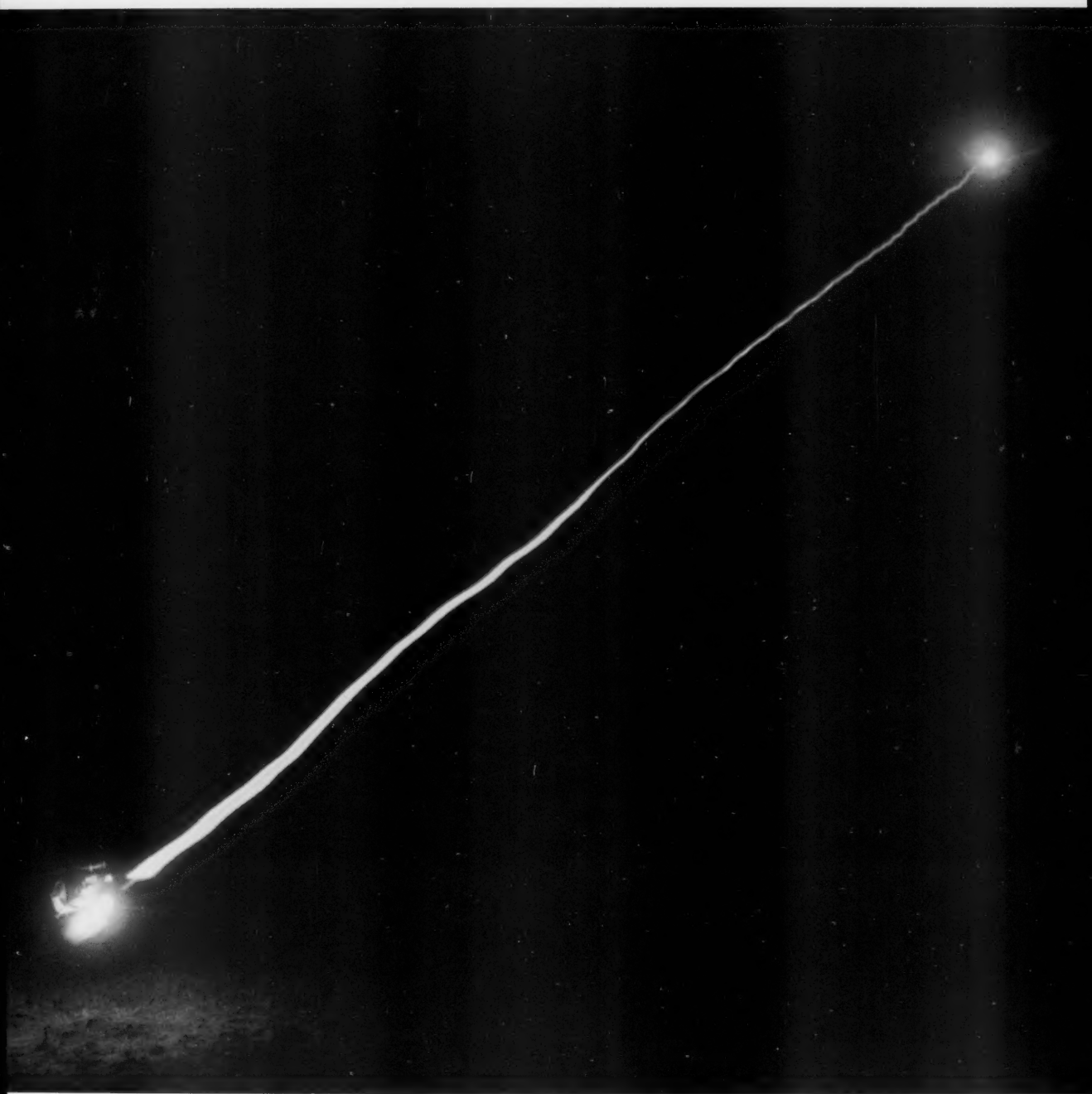
When fully implemented, the SDT promises to make self–development a stronger and less neglected pillar of leader development. The SDT provides incentive for self–development. It serves to guide and focus the self–development efforts of NCOs, and it provides feedback. These are always necessary conditions for effective learning, and that is what self–development means—effective learning.

The SDT provides incentive because the NCO has a stake in doing well. Good SDT scores increase the chances of being promoted. The tests give focus to the NCO's self–development efforts. The SDT notice tells an NCO what materials he or she needs to study in preparing for the test. This gives direction and discipline to self–development. Finally, and perhaps most importantly, NCOs are given feedback on their self–development efforts.

A wise teacher once said that, to learn, one must **want** something, **do** something, and **get** something. Given the importance of SDT scores, soldiers almost certainly **want** to score well on the SDT. Given the guidance they get through the notice, they know what to **do** to score well. In the short term, what they **get** are scores that tell them how well they did on the SDT and its different sections. In the long term, they **get** the career benefits that come from doing well on the SDT.

As an NCO, what does the SDT mean in terms of your development as a leader? The SDT means that you have stronger incentive for self–development, guidance to focus and discipline self–development, feedback in test scores to tell you the results of your self–development and the long–term rewards for doing well.

What does the SDT mean in terms of your military career? It means that your career progress is strongly influenced by your own self–development efforts.

Tomorrow's successful noncommissioned officer will be the soldier who uses personal time and effort to increase technical and tactical skills. The NCO of the future must learn to lead soldiers and plan and conduct training. No longer can an NCO rely solely on the formal schooling available through the NCO education system (Primary Leadership Development Course, Basic Noncommissioned Officer Course, and Advanced Noncommissioned Officer Course) or unit and on–the–job training.

The successful NCO will be the soldier who seizes the initiative to develop professionally. The SDT is a means of recognition for those who succeed in that effort.